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# ENVIRONMENTAL ASSESSMENT BOARD



## ONTARIO HYDRO DEMAND/SUPPLY PLAN HEARINGS

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VOLUME: 180

DATE: Monday, January 18, 1993

BEFORE:


HON. MR. JUSTICE E. SAUNDERS	Chairman
DR. G. CONNELL	Member
MS. G. PATTERSON	Member

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ENVIRONMENTAL ASSESSMENT BOARD  
ONTARIO HYDRO DEMAND/SUPPLY PLAN HEARING

IN THE MATTER OF the Environmental Assessment Act,  
R.S.O. 1980, c. 140, as amended, and Regulations  
thereunder;

AND IN THE MATTER OF an undertaking by Ontario Hydro  
consisting of a program in respect of activities  
associated with meeting future electricity  
requirements in Ontario.

Held on the 5th Floor, 2200  
Yonge Street, Toronto, Ontario,  
Monday, the 18th day of January,  
1993, commencing at 9:00 a.m.

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VOLUME 180  
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B E F O R E :

THE HON. MR. JUSTICE E. SAUNDERS	Chairman
DR. G. CONNELL	Member
MS. G. PATTERSON	Member

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1 ---Upon commencing at 9:03 a.m.

2 THE REGISTRAR: Please come to order.

3 This hearing is again in session. Please be seated.

4 THE CHAIRMAN: Mr. Rodger?

5 MR. RODGER: Thank you, Mr. Chairman.

6 AMIR SHALABY,  
7 PAUL JONATHAN BURKE,  
8 JOHN KENNETH SNELSON,  
9 BRIAN PAUL WILLIAM DALZIEL; Resumed.

9 CROSS-EXAMINATION BY MR. RODGER (Cont'd):

10 Q. Panel, last day we were looking at  
11 Exhibit 1041 and we were discussing Hydro's EEI and  
12 load shifting targets for the years 1992 and 1993.

13 Just to quickly review, the chart that I  
14 provided on page 1 of Exhibit 1041, the difference in  
15 the numbers between the Update and load forecast and  
16 that taken from HR 21 is that the numbers from the load  
17 forecast and the Update are cumulative totals, whereas  
18 the HR 21 numbers are only for specific years; is that  
19 correct?

20 MR. SHALABY: A. That is correct. And  
21 there is one additional difference, and that is the  
22 cumulative numbers are what we call 'system net  
23 impacts'; the one-year snapshot is customer impacts.  
24 There is a translation that takes place between  
25 customer impacts working their way on to the system.

1 Q. So if our concern is about customer  
2 impacts and we look at the HR 21 numbers, for 1992 the  
3 target was 308.4 megawatts. Can you tell me, Mr.  
4 Shalaby, how much of that target was achieved in 1992?

5 A. Those numbers will be available the  
6 first quarter of '93, so we don't have an audited,  
7 verified number that will match this one. But the  
8 early estimates based on the first three-quarters of  
9 '92 and initial estimates of the fourth quarter  
10 indicate that we'd be a little short of 308,  
11 particularly in the load shifting area. The load  
12 shifting area hasn't panned out as forecast.

13 Q. Do you think I could get those  
14 numbers provided to me when they are released?

15 A. Certainly. And they will probably be  
16 provided to the OEB. If you need them provided ahead  
17 of that we would be glad to do so.

18 Q. Now, for the 1993 customer impact  
19 target, Mr. Shalaby, using the HR 21 figure, that was  
20 350.9. Does that target remain more or less the same?

21 A. No, in all likelihood the 1993  
22 program will be scaled down from what was previously  
23 forecast.

24 Q. Do you have any kind of order of  
25 magnitude that you could tell me by how much?



1 A. Possibly down to the 300 megawatt  
2 range, around there.

3 Q. Now, in this panel you also briefly  
4 talked about the demand management budget, and over the  
5 long term that budget, as I understand it, was reduced  
6 from \$6 billion to 5 billion; is that correct?

7 A. That occurred at the time of the  
8 managing of surplus memos that we have in attachments A  
9 and B, yes.

10 Q. I wonder if we could look just for  
11 the next couple of years -- if you could indicate how  
12 the budgets in those years have changed.

13 If you could turn to page 3 of Exhibit  
14 1041 - and this is again table 3-2 taken from the rate  
15 hearing submission - and it shows the 1992 and 1993  
16 energy management function, OM&A and capital costs.

17 Could you tell me, Mr. Shalaby, first for  
18 1992 OM&A - the total shown is 97.1 million - have you  
19 any idea what the actual figure was for 1992?

20 A. It is projected to be slightly below  
21 that, but for practical purposes on budget or slightly  
22 below budget.

23 Q. And how about for the capital costs  
24 for '92?

25 A. I'm not sure whether capital is

1 slightly over or on budget. It might be slightly over.  
2 I think that sum of the two is within budget  
3 guidelines, but one is higher and one is lower. That  
4 is my recollection.

5 Q. And for '93 I understand there are to  
6 be fairly significant reductions in the OM&A and  
7 capital; is that correct?

8 A. That is correct, yes.

9 Q. Can you give me an order of magnitude  
10 for those numbers, for the OM&A and capital?

11 A. That is still being worked on and the  
12 details are not fully settled, to my knowledge. They  
13 may have settled, but I have been out of circulation  
14 for a little while. So...

15 Generally, I think you can see that the  
16 1993 budgets could be closer to 1992 than what you see  
17 on this page here. The split between OM&A and capital  
18 may shift a bit. There are some accounting changes  
19 that take some money out of OM&A and put them on  
20 capital. Some deliver costs have been capitalized, but  
21 the sum of the two will be closer to the sum of the two  
22 in 1992.

23 Q. I take it it will be the end of the  
24 first quarter before those figures are known as well?

25 A. Or maybe even sooner. There will be

1 a corporate budget sooner than that.

2 Q. Now, last week you had a discussion  
3 with Mr. Poch, I believe it was, regarding re-estimates  
4 of your average delivery costs for demand management  
5 programs. And I understand that the cost per  
6 kilowatt - I take it that is the average cost per  
7 kilowatt - had been increased from \$350 a kilowatt to  
8 \$700 a kilowatt; is that correct?

9 A. Mr. Burke and I indicated that the  
10 System Planning Division use that number for the  
11 purpose of their studies.

12 Q. I thought Mr. Burke had testified  
13 that that increase, it really only applied to a couple  
14 of end uses; is that correct?

15 MR. BURKE: A. I think what I said was  
16 that the effect of the increase was only to reduce the  
17 potential in a couple of end uses.

18 Q. I see.

19 A. I would just like to add to what Mr.  
20 Shalaby said, that I think that number remains under  
21 review, but it was the number used last summer.

22 Q. And that figure, that \$700 per  
23 kilowatt, that really only applies to average delivery  
24 costs in the short term, over a five-year period as  
25 opposed to long-term cost estimates; is that correct?

1                   A. No. Actually, it is almost the  
2                   opposite.

3                   For estimates of impact in the short term  
4                   Energy Management has their own administration costs  
5                   for each program, but in the long term where programs  
6                   are not specified and we are looking for a generic  
7                   administration cost figure, that is where that number  
8                   comes in, and that is why it is the System Planning  
9                   Division that has investigated it. It is for purposes  
10                  of long-term screening, using the total customer cost  
11                  test.

12                  Q. So can you draw the conclusion, then,  
13                  Mr. Burke, from that that at least for the short term  
14                  since you had to make this change that you have  
15                  either -- it says that you have either really  
16                  underestimated those delivery costs or else now you  
17                  have the right number and it ended up being twice as  
18                  much as you originally anticipated?

19                  A. I was not involved in estimating that  
20                  number.

21                  My understanding is that the number is  
22                  based on the total administration costs to date  
23                  relative to the impact to date, and in that sense my  
24                  own judgment would be that it probably is an  
25                  overestimate of the long-term administration costs



1 because this is at the startup end of the program.

2 As I say, I don't think it has had a  
3 material impact on projection of demand management,  
4 attainable demand management used in this forecast that  
5 the number used was 700 as opposed to \$350 a kilowatt,  
6 and I again say I think it is under investigation still  
7 whether that is the appropriate long-term estimate and  
8 effectively whether it was appropriate to use the very  
9 short-term experience that we have had as a good  
10 indicator of long-term costs.

11 [9:14 a.m.]

12 Many programs are in a demonstration and  
13 start-up phase at this point and have not yielded very  
14 many megawatts compared to the costs incurred to launch  
15 and demonstrate them.

16 Q. I recall you saying, Mr. Burke, that  
17 this matter was still under review. What is the next  
18 document that will see some analysis of this and a  
19 review of this matter; will it be at the rate hearing?

20 A. I doubt very much that it would come  
21 up for the rate hearing, because the rate hearing  
22 covers the period for which specific programs exist and  
23 for which energy management has program-specific  
24 administration numbers.

25 The next time it really will surface is

1 in the next long-term forecast.

2 Q. Now, earlier in this panel in your  
3 direct evidence you talked about standards and how you  
4 have more of an increased confidence in the amounts of  
5 the standards. Back in the Update you identified a  
6 mandation risk of 2,600 megawatts; that really hasn't  
7 been raised in this panel, and I wonder if you could  
8 tell me what has happened to that mandation risk.

9 Has that been reduced somehow by your  
10 increased confidence in standards, or what is the  
11 current mandation risk?

12 A. Well, it, let me just check that  
13 we're talking about the same thing, first of all.

14 Are we talking about the risk in the year  
15 2015 to the attainable demand management if the  
16 standards anticipated in the DSP Update and the fuel  
17 switching mandation in the new markets, neither of  
18 those appear, is that...?

19 Q. I thought it was more the broader  
20 uncertainty that arose generally from uncertainty about  
21 government action. And from the primary load we talked  
22 about a 2,600 megawatt risk because of that  
23 uncertainty.

24 And I'm wondering now, specifically with  
25 respect to standards, and you say you have more



1 confidence in what the government's going to do, how it  
2 has impacted on that 2,600 megawatt mandation risk.

3 A. Well, if you're talking about what  
4 I'm talking about, then the risk was essentially the  
5 difference between the 100 per cent penetration rate  
6 that standards are regulated, fuel switching meant; and  
7 the penetration rates that programs would deliver in  
8 the same market segments. And we have, as far as fuel  
9 switching is concerned, eliminated mandation of fuel  
10 switching in the new market. And to the extent that  
11 there is potential for fuel switching remaining in the  
12 new market, it is delivered by programs. So there's no  
13 risk there of that sort any more.

14 As far as standards are concerned, the  
15 incremental standard effect relative to the DSP Update  
16 was reduced as we indicated in, I think it was page 5  
17 or 6 of the overheads, Exhibit 937, is reduced from 690  
18 megawatts to 350 megawatts in the year 2000. And while  
19 I can't say off the top of my head what proportion of  
20 the 350 megawatts already represents standards that are  
21 in effect or about to be declared, I think that there  
22 is fairly little risk at this point in the 350  
23 megawatts.

24 Certainly the standards included in the  
25 basic load forecast this time are standards which we

1 have a high confidence will be implemented.

2 So relative to the previous forecast, I  
3 would say the mandation risk has been largely  
4 eliminated.

5 Q. Just so that we are sure we are both  
6 speaking about the same thing, this mandation risk is  
7 described, if you have Exhibit 452, paragraph 4(B) of  
8 the executive summary.

9 A. Sorry, which paragraph is that?

10 Q. It's the executive summary, and it's  
11 paragraph 4(B).

12 THE CHAIRMAN: It's also, Mr. Rodger,  
13 shown in the diagram on page 9, of course.

14 MR. RODGER: Yes, that's right Mr.  
15 Chairman.

16 MR. BURKE: Yes. What's described in  
17 4(B) is what I was describing to you. Yes.

18 MR. RODGER: Q. And essentially now that  
19 risk has disappeared?

20 MR. BURKE: A. There's very little of it  
21 left, yes.

22 Q. Now, I have a couple of questions  
23 about the Bruce "A" review.

24 Back in the Nuclear Panel, I seem to  
25 recall evidence given that in 1991 the corporation made

1 a decision, and, in essence, approved monies and  
2 expenditures for the retubing of the first units of  
3 Bruce "A"; is that correct, Mr. Snelson?

4 I thought to be maybe a bit more specific  
5 that it included monies for building the infrastructure  
6 or housing at that site for where the retubing would  
7 take place, and which could be used for other retubings  
8 at Bruce.

9 MR. SNELSON: A. My recollection is not  
10 complete on the stages of the approval of the  
11 rehabilitation at Bruce, but I do recall that it was  
12 being approved in a number of stages, and that the --  
13 there was an initial estimate of the total  
14 rehabilitation effort that was required at the Bruce  
15 station; and that the question was asked: How much  
16 rehabilitation is needed over the next 10 years or so?

17 And that was discussed and it was  
18 accepted, I believe, but subject to each of the  
19 individual parts of that rehabilitation being brought  
20 up for decision-making as and when they needed to make  
21 decisions to commit the money to perform the various  
22 operations.

23 So the management and board at the time  
24 did not want a situation where they got presented with  
25 little pieces of work, each of which was aimed towards

1 the rehabilitation of Bruce and had to approve them  
2 individually without knowing what was the bigger  
3 picture.

4 Q. So those decisions are part  
5 approvals, if you like, that were granted in 1991.  
6 Have those essentially been put on hold and are  
7 pending, awaiting the decision of this capital review  
8 of Bruce?

9 A. I believe the current situation is  
10 described in the October board memo.

11 Q. This is attachment A?

12 A. Yes, I'm in attachment A, and I'm in  
13 the executive summary, at (i), and the point is in  
14 point 4(A).

15 Q. Right.

16 A. And the words say: Pending the  
17 conclusion of this review - I'm halfway through the  
18 bullet.

19 Pending the conclusion of this review,  
20 which is expected to take up to six  
21 months, and apart from releases for  
22 refurbishing and remedial work on Bruce  
23 Units 1, 3 and 4 boilers, and the Bruce  
24 unit for condenser work, no new capital  
25 releases will be requested of the board

1 beyond those already approved.

2 Capital releases under existing  
3 approvals will be minimized consistent  
4 with maintaining safety and performance  
5 requirements.

6 [9:25 a.m.]

7 Q. So those decisions or approvals were  
8 made in 1991; they haven't been frozen. They are still  
9 proceeding, perhaps at a lower pace, but...

10 A. I think the words here speak for  
11 themselves. The work that is continuing is with  
12 respect to the some boiler work and other work as  
13 required for maintaining safety and performance  
14 requirements as it is discussed here.

15 Q. Now, you talked a little bit, Mr.  
16 Snelson, about the impact that the decision could have,  
17 the capital review could have on your planning, but I  
18 don't think you said -- assume that the review came  
19 back and the recommendation was to shut down one or  
20 more units of Bruce. Could you tell me by how much the  
21 need dates for new major supply would advance if such a  
22 decision was made with respect to 1, 2 or all four  
23 units of Bruce?

24 A. We are just kind of eyeballing this,  
25 and from the load and capacity table that is given in



1 Appendix J to Exhibit 796, I am looking at table A1-2,  
2 though I think the answer would be the same if I looked  
3 at A1-1. The line that is second from the bottom is  
4 balance, it shows a surplus or shortage in terms of  
5 generation, and the balance line is more than the 800  
6 megawatts of a Bruce unit, one Bruce unit, in the year  
7 2005 and less than in the year 2006.

8 So, a simplistic view of this - and I  
9 stress it is simplistic - would be that it would  
10 advance the need date to that time. And the reason  
11 it's simplistic is that this is assuming that nothing  
12 else changes in the plant and that we don't bring in  
13 more non-utility generation if it's offered to us and  
14 other such things that may be available in that time  
15 frame. So the simplistic view is that, but there are  
16 other things that could mitigate that.

17 MR. B. CAMPBELL: Mr. Chairman, if I am  
18 reading the same table, I think perhaps Mr. Snelson has  
19 skipped a year.

20 MR. SNELSON: Yes, I have. It's  
21 2006/2007. I'm sorry.

22 DR. CONNELL: Mr. Snelson, have you taken  
23 into account Lakeview 7 and 8 in that response?

24 MR. SNELSON: Mr. Dalziel is pointing out  
25 that they are retiring at that time, so I think the



1 answer is really that, yes, that is taken into account,  
2 and though it may have some influence as to whether in  
3 fact Lakeview units are kept available if required, and  
4 as I have said before, that decision has not yet been  
5 made.

6 MR. RODGER: Q. And that date of 2006/  
7 2007, that assumes that all four units of Bruce would  
8 be involved in the wind-down; is that correct?

9 MR. SNELSON: A. No, that is for one  
10 unit.

11 Q. That's for one unit?

12 A. Yes.

13 Q. What would it be for all four units?

14 A. On the same sort of basis then, you  
15 are back to around the year - and we are talking 3,000  
16 megawatts - you are about to around the year 2003. But  
17 again, it is on the simplistic basis that we do not  
18 adjust other parts of our plan.

19 Q. Okay. Now, this next issue has been  
20 touched upon, I don't want to go over it again but I do  
21 want to be absolutely clear on it, and this is this  
22 question of shelf life again. Why it became an issue  
23 for me, at least, is when I saw the phrase "shelf life"  
24 in Exhibit 796 that you talked about with Mr.  
25 Greenspoon, that certainly jumped out at me because as

1 far as I am aware, it's the first time in Hydro's  
2 written evidence that that phrase has appeared.

3 So I take it from discussion of last  
4 week, that it is Hydro's position that there is no such  
5 thing as shelf life or time limits associated with  
6 approvals that are before this Board; is that correct?

7 A. Our position is that the approval we  
8 are requesting is not time limited.

9 Q. And has Hydro changed its position on  
10 this since the DSP was first released in 1989?

11 A. I don't believe so.

12 Q. And of course, in 1989 Hydro's  
13 program centred around Plan 15, which of course had  
14 requests for approvals for new major supply. So I take  
15 it then if Hydro hasn't changed its position, that for  
16 those approvals, for those new major supply approvals,  
17 they also didn't have any kind of shelf life or time  
18 limits associated with them; is that correct?

19 A. I believe there was no time limit  
20 associated with our request for approvals.

21 Q. Would you agree with me, Mr. Snelson,  
22 that, for example, let's say an intervenor at this  
23 hearing made a case for new major supply approval, and  
24 let's say that that case found approval with this Board  
25 and approval was granted, I take it it would be Hydro's

1 view that there would be no merit in an argument that  
2 said that that new major supply approval had shelf life  
3 associated with it; is that correct? In other words, I  
4 am saying what is good for Ontario Hydro is also good  
5 for other intervenors at this hearing. If there is no  
6 shelf life for your approvals then there would be no  
7 shelf life associated with any other approvals that may  
8 come from this Board.

9 A. I don't think I could comment on a  
10 hypothetical approval requested by somebody else for  
11 reasons that we wouldn't support. If we weren't  
12 supporting the approval, I don't know quite how we  
13 would have a position on whether it would be  
14 appropriate for it to be time limited or not.

15 Q. I wonder if you could help me explain  
16 something, Mr. Snelson. I wonder if you could turn to  
17 Volume 152, transcript Volume 152, please, and it's  
18 page 26847. Volume 152, page 26847. Mr. Snelson, this  
19 is a discussion that we had back in Panel 10. I want  
20 to read my question and your answer is from line 16.

21 "QUESTION: Now, Mr. Snelson, you  
22 agreed with me at the outset that with  
23 respect to new major supply, that it  
24 wasn't really a question of if that  
25 supply will be needed; it's a timing

1 question, it's a question of when.

2 "ANSWER: I said in most cases.

3 "QUESTION: And you, I believe it was  
4 you, in your direct evidence said that  
5 again part of the reason why you are no  
6 longer seeking such approvals is that  
7 those approvals might become stale or  
8 somehow void over the passage of time,  
9 that approvals have shelf lives  
10 associated with them; is that fair?

11 "ANSWER: That is correct.

12 "QUESTION: One thing that I didn't  
13 get from your evidence, you didn't say  
14 what the shelf life was for an approval  
15 for new major supply. Could you tell me  
16 that, please?

17 "ANSWER: I think it is something  
18 that's rather hard to define. The longer  
19 the period between obtaining the approval  
20 and trying to take action based upon that  
21 approval, the longer that intervening  
22 period, then the greater likelihood that  
23 there will be some circumstance that  
24 wasn't anticipated at the time the  
25 approval was given that would give cause

1                   for people, for pressure to reopen the  
2                   questions and have that re-examined."

3       [9:35 a.m.]

4                   So, Mr. Snelson, in this discussion we  
5       had you said that part of the reason for not seeking  
6       those approvals was this idea of a shelf life. Then I  
7       asked you to define the shelf life and you really  
8       couldn't do that, but the clear indication is that that  
9       was a view of Hydro back in Panel 10.

10                  And my question is: What has changed  
11       from 1989 when the plan was first released, when shelf  
12       life wasn't an issue, to our discussion here on the  
13       transcript to today's discussion?

14                  A. I think that what has changed, and it  
15       had changed by the time of Panel 10 and it is no  
16       different now, is that at the time of the original DSP  
17       we expected to submit and act upon major supply  
18       approvals within a relatively short period of time, and  
19       the five-year action plan period has been mentioned.

20                  And so, although we recognize practically  
21       that there may be time limitations even if you can't  
22       define them that we still had to have the approvals  
23       because we expected to act upon those approvals and to  
24       submit project-specific environmental assessments  
25       within five years of the end of the planned process.



1                   The situation at the time of Panel 10 and  
2                   now is that we don't expect to submit environmental  
3                   assessments for major supply options within five years,  
4                   and consequently, if we sought approvals now we would  
5                   be doing so on the basis that we weren't expecting to  
6                   act upon them in a relatively short period of time.

7                   Q. So that the five-year window, nothing  
8                   has changed about that. That is still the same as in  
9                   day 1 when the plan was first released; is that right?

10                  A. It was defined as five years from the  
11                  end of this process, and that definition hasn't changed  
12                  but maybe the end of this process has changed and so  
13                  the five years has shifted a bit.

14                  Q. So do I take from that that when we  
15                  first started off on this journey Hydro thought that we  
16                  would have got a decision from this Board at least  
17                  before 1994; is that fair?

18                  A. Yes.

19                  Q. And because that may not be the case  
20                  now, that has changed some of the principles by which  
21                  you have been pursuing approvals and abandoning others;  
22                  is that fair?

23                  A. No, I don't believe so.

24                  Q. Okay. I want to move on to Mr.  
25                  Shalaby.



1                   When you were talking about the future of  
2                   the energy management program and some of the cutbacks  
3                   that have been talked about you did say that you wanted  
4                   to do things now and not leave them for later on  
5                   because there would be, if you like, a lost opportunity  
6                   by not pursuing those things today. Do you recall that  
7                   discussion?

8                   MR. SHALABY: A. Yes, I do.

9                   Q. And I remember the thrust of it was  
10                  that if you left it until tomorrow to do it would be  
11                  more expensive?

12                  A. That is correct.

13                  Q. And would you agree with me, Mr.  
14                  Shalaby, that --

15                  A. Some applications, some things are of  
16                  this nature, yes.

17                  Q. Would you agree with me, Mr. Shalaby,  
18                  that this concept, if we can call it a 'lost  
19                  opportunity cost', that that could also apply to supply  
20                  measures as well as demand-side measures in the context  
21                  in which you were talking?

22                  A. I guess I can address the nature of  
23                  demand management and the lost opportunities as it  
24                  relates to demand management. I don't know if anybody  
25                  else on the panel would want to address whether it

1 applies to supply options as well...

2 MR. SNELSON: A. Well, I will try and  
3 answer your question, Mr. Rodger, but it would help me  
4 if you could point out what sort of areas you think  
5 there might be a lost opportunity.

6 Q. Maybe I could just put it this way.

7 Since Hydro has testified in this panel  
8 that there has been no change in your position with  
9 respect to approvals for new major supply I take it  
10 that at least in Hydro's view you see no lost  
11 opportunity cost by not seeking those new major supply  
12 approvals in this forum; would that be fair?

13 A. I can't think of any lost  
14 opportunities with respect to major supply that are  
15 comparable to the sort of lost opportunities that Mr.  
16 Shalaby has referred to in terms of demand management.

17 Q. But in terms of the principle which  
18 was raised by Mr. Shalaby in his direct in this panel  
19 that if you don't do some things today they could be  
20 more expensive down the road, and I am asking if you  
21 apply that concept to approvals for new major supply,  
22 by having no change of your position on this Hydro is  
23 essentially saying to the Board that there is no lost  
24 opportunity cost by not seeking approvals for major new  
25 supply now as opposed to some point down the road?

1                   A. The lost opportunity Mr. Shalaby is  
2     referring to is the type of lost opportunity that  
3     occurs because it is cheaper and more convenient to  
4     build energy efficiency into a new building or a new  
5     piece of equipment or whatever when it is made in the  
6     first place rather than to come along after it is  
7     completed and say we will try and reinsulate this house  
8     or we will try and make this modem more efficient.

9                   And there is a very clear difference  
10    between the cost of implementing that option when it is  
11    first produced as compared to trying to come along  
12    later and implement that option. And I don't know of  
13    any supply, major supply situations that are comparable  
14    to that.

15                  Q. Would you not agree that the same  
16    rationale applies no matter what you are talking about  
17    for utility planning, that there are costs and  
18    benefits, and if you don't do something in planning  
19    today it could cost something more down the road? In  
20    terms of the concept it applies to various parts of  
21    utility planning, doesn't it?

22                  A. The principle would be the same, but  
23    I'm at a loss to come up with, for major supply, an  
24    actual example.

25                  Q. Couldn't an example be that Hydro has

1 done all the groundwork since the mid-1980s about new  
2 major supply, all the groundwork is there, and yet it  
3 doesn't seek the approval at this hearing, therefore,  
4 it is going to cost more after this hearing is over to  
5 start that process from scratch again than to follow  
6 through and get the approval based on that work that it  
7 has taken you a number of years to do. I guess that is  
8 my point.

9 A. Well, I think in terms of major  
10 supply that is a somewhat smaller consideration than  
11 the one that we have discussed in terms of demand  
12 management where the option can cost two times as much  
13 and may be just simply infeasible if performed later  
14 rather than sooner.

15 And the lost opportunities that Mr.  
16 Shalaby is referring to also refer to options that we  
17 prefer, we see as being part of our base plan, and it  
18 is a question of timing. And with respect to the major  
19 supply options at the moment we are even undecided as  
20 to what form of major supply we would seek approval  
21 for.

22 So I think it is very different, a very  
23 different situation.

24 Q. Let me try it this way. You remember  
25 back in Exhibit 3, chapter 19, Hydro described

1 generally the purpose of its program as ensuring that  
2 the province maintains a continuing reliable supply of  
3 electricity.

4 And as well, you set out some specific  
5 purposes of the program. And one of those was to  
6 obtain approvals which will avoid duplication of the  
7 consideration of planning issues and subsequent program  
8 applications.

9 Has Hydro changed its position with  
10 respect to that specific purpose regarding its program  
11 that is now before the Board? In other words, is that  
12 goal of avoiding repetition of planning issues at  
13 future hearings, is that still a specific purpose of  
14 Hydro's program?

15 A. I believe so.

16 MR. RODGER: Those are all my questions,  
17 Mr. Chairman. Thank you.

18 THE CHAIRMAN: Thank you, Mr. Rodger.  
19 Ms. Marlatt?

20 MS. MARLATT: Good morning. My name is  
21 Constance Marlatt. I am counsel for the North Shore  
22 Tribal Council, United Chiefs and Councils of  
23 Manitoulin, and the Union of Ontario Indians.

24 I would like to just begin by informing  
25 the Board that during our site visit to the North Shore



1 the Board was fortunate enough to meet with an Elder  
2 named Dr. Dan Pine, Sr. You met with him at Garden  
3 River. He died in December of this year at the age of  
4 92, and because he was such a valuable source, at least  
5 to myself and certainly to the entire North Shore area,  
6 as an Elder I wanted to let the Board know of that  
7 unfortunate loss to that area.

8 THE CHAIRMAN: That is the first that I  
9 have heard of that, Ms. Marlatt, and certainly it was a  
10 great experience to meet with him and to hear what he  
11 had to say.

12 MS. MARLATT: Thank you.

13 THE CHAIRMAN: And if you convey our  
14 condolences to his colleagues and members of his Band,  
15 would you do that for us?

16 MS. MARLATT: I will. Thank you, Justice  
17 Saunders.

18 CROSS-EXAMINATION BY MS. MARLATT:

19 Q. Mr. Snelson, I believe I would like  
20 to start with some questions for you. In fact, I  
21 suspect most of my questions will be for you as usual.

22 I would like to start by asking you to  
23 look at Exhibit 3 -- actually, I'm sorry, that is not  
24 correct. It is page 3 Exhibit 796.

25 Now, this is table 1-1, entitled



1 "Economic Impact of 10-Year Project Deferrals and  
2 Mothballing". And referring to Little Jackfish, the  
3 Manitoba Purchase, on this table, Mr. Snelson, they  
4 both have the same unit benefit of deferral; is that  
5 correct?

6 MR. SNELSON: A. In terms of dollars per  
7 kilowatt of present value, yes.

8 Q. I presume that in fact the ranking on  
9 this table is based on the unit benefit of deferral?

10 A. Yes.

11 Q. Now, it was the Manitoba Purchase  
12 that was cancelled in December, 1992?

13 A. That's correct.

14 Q. And yet it falls after Little  
15 Jackfish in this table.

16 I was wondering, considering they both  
17 have the same unit benefit of deferral, if there is any  
18 reason for Little Jackfish preceding the Manitoba  
19 Purchase in this table.

20 [9:50 a.m.]

21 A. That figure is a summary of a more  
22 detailed figure which is figure 4.1 of attachment G to  
23 Exhibit 796 and the actual calculation that is shown  
24 there shows Little Jackfish at \$417 per kilowatt of  
25 deferral, and the Manitoba Purchase at \$370 per

1 kilowatt deferral.

2 But for the purpose of the summary, they  
3 were both rounded to 400.

4 Q. What was the figure for Manitoba  
5 Purchase?

6 A. \$370.

7 Q. So, in fact, then, Little Jackfish is  
8 more economic to defer or would have been more economic  
9 to defer than Manitoba Purchase, according to this  
10 table?

11 A. Yes.

12 Q. Thank you.

13 Mr. Snelson, you had some questions about  
14 public consultation on the Exhibit 796, and I didn't  
15 want to ask you about that in a general, since I know  
16 you've had an undertaking on that. But can you tell me  
17 are you aware of whether or not there was any public  
18 consultation on the issue of order of deferrals in  
19 hydraulic projects?

20 A. Not specific to that issue that I  
21 know of.

22 There have obviously been consultations  
23 with respect to hydraulic projects as part of their  
24 project site-specific environmental assessments, but I  
25 wouldn't be aware of any -- I am not aware of any

1 consultation specifically on the issue of which  
2 deferral is preferable to which other.

3 Q. And which deferral to what time  
4 period is preferable? That would be the same--

5 A. The same answer.

6 Q. --type of issue with no public  
7 consultation on that issue.

8 A. That I am aware of.

9 Q. That is correct?

10 A. That's correct.

11 Q. Are you aware, Mr. Snelson, of  
12 whether or not Ontario Hydro met with any of the  
13 affected communities concerning the hydraulic  
14 deferrals? So, for example, were there any meetings  
15 with the communities around Little Jackfish or Patten  
16 Post?

17 A. Well, my understanding is that there  
18 have been consultations with respect to the project  
19 specific environmental assessments, and whether the  
20 issue came up in any of those meetings, I don't know.

21 Q. So you were not involved and you  
22 don't know anyone who was involved from a planning  
23 level perspective as part of this hearing with meeting  
24 with those communities?

25 A. I am not aware of anything.

1 Q. I would like to now review with you,  
2 Mr. Snelson, the history of Patten Post and Little  
3 Jackfish within the DSP process. I recognize that  
4 sounds sort of overwhelming, it is not. I plan on just  
5 going over the dates for in-service dates for those  
6 projects with the Board.

7 I believe you have received a document  
8 that we have prepared entitled: Materials for  
9 Cross-Examination, Panel 11. Can this be given a  
10 number as an exhibit, please?

11 THE HEARINGS CLERK: And the next number,  
12 Mr. Chairman, is 10.42.

13 ~~---~~ EXHIBIT NO. 1042: Document entitled: Materials  
14 for Cross-Examination, Panel 11.

15 MS. MARLATT: There are additional copies  
16 at the front if anyone would like to see a copy.

17 Q. Mr. Snelson, do you have that  
18 document?

19 MR. SNELSON: A. Yes.

20 Q. Looking at the front page I have  
21 entitled this in-service dates for Little Jackfish and  
22 Patten Post hydroelectric projects, according to  
23 Ontario Hydro documents.

24 The first reference is to Exhibit 3, the  
25 Demand/Supply Plan, and would you agree with me, Mr.

1 Snelson, that the Patten Post project was not listed as  
2 a project Ontario Hydro was seeking approval for in any  
3 of the cases in the approvals chapter, chapter 19?

4 A. I believe that is the case. I  
5 haven't been back to check, but I believe that is the  
6 case.

7 Q. I am sure you will correct me if you  
8 determine--

9 A. Yes.

10 Q. --that is inaccurate.

11 Little Jackfish was listed as a  
12 generating facility for approval in the hydraulic  
13 program as associated with Plan 15 in the approvals  
14 chapter.

15 A. Certainly Little Jackfish was  
16 identified as one of the sites, yes.

17 Q. Looking down to the extract from the  
18 Demand/Supply Plan, again Exhibit 3, this is from page  
19 12-13, figure 12-6.

20 I recognize that it is a little small, we  
21 had to shrink it to get it on the page, so it is a  
22 little difficult to read, but, Mr. Snelson, would you  
23 agree with me that the approvals which were sought as  
24 part of chapter 19 were for the hydraulic projects  
25 shown on this graph as having in-service dates of



1 before 2004? I will read those out for you: Lake  
2 Gibson, Big Chute, Mattagami Complex, Little Jackfish,  
3 Niagara and Abitibi Complex.

4 Do those ring a bell, Mr. Snelson?

5 A. I would have to check, to be quite  
6 honest.

7 Q. Well, why don't I refer you to, then,  
8 Exhibit 3, page 19-2, and this is the list for the  
9 Demand/Supply Plan 15.

10 A. Yes.

11 Q. Thank you.

12 Now, Mr. Snelson, in Exhibit 3, Patten  
13 Post was referenced as part of the hydraulic plan which  
14 was listed on page 12-13, and that describes a possible  
15 in-service date of 2009.

16 Now, you don't have to refer back to the  
17 actual text there, but you can see it is certainly on  
18 the table that if we look at Patten Post, which is  
19 about two-thirds of the way down, we see the in-service  
20 date for 2009.

21 Do you see that?

22 A. Yes.

23 Q. And an in-service date for Little  
24 Jackfish, which is up near the top of 1996.

25 A. Yes.



1 Q. So the original approval sought under  
2 Plan 15 were all for projects with in-service dates  
3 before 2004; you've agreed with that?

4 A. Yes.

5 Q. Looking at the second page, please,  
6 of Exhibit 1042 this is a reference to the Order in  
7 Council concerning Patten Post, it was filed as Exhibit  
8 453 to this hearing. I have extracted a section of  
9 that Order in Council which, in section 2, states that  
10 subject to section 3, Ontario Hydro may participate in  
11 the Elliot Lake region economic development program,  
12 and section D of that states that by taking all  
13 reasonable steps to ensure that an environmental  
14 assessment for the Patten Post hydraulic station site  
15 is completed, reviewed and approved in time for  
16 construction of the station by Ontario Hydro to begin  
17 in 1994 and for the station to be in-service in 2000;  
18 do you recall that, Mr. Snelson?

19 A. Yes, in general terms.

20 Q. So you have seen that Order in  
21 Council?

22 A. I have seen that description of it,  
23 yes.

24 Q. Are you familiar or are you aware of  
25 what the present status of that Order in Council is?

1 Is it still in effect, do you know?

2 A. I would refer you to attachment A to  
3 Exhibit 796, which is the October board memorandum, and  
4 attachment A to the board memorandum, which is the main  
5 body of that, on page 13 has these words:

6 While the provincial government had  
7 directed Hydro to proceed on an advanced  
8 schedule to develop Patten Post,  
9 subsequent difficulty in reaching  
10 agreement with members of First Nations  
11 regarding their involvement with project  
12 planning has left the status of the  
13 project indeterminate.

14 Q. So as far as you know there's been no  
15 change to the Order in Council, though?

16 A. I don't know of any change in the  
17 legal documents, but that is our understanding as to  
18 the overall status of the project at the moment.

19 Q. Is indeterminate?

20 A. Yes.

21 Q. Although you have a date of 2011 in  
22 your Exhibit 796; correct?

23 A. That is correct.

24 But the status with regard to approvals  
25 and the government direction is indeterminate.

1 Q. So from a planning perspective, do  
2 you consider that to be an indeterminate amount now  
3 within your 1,400 to 1,800 megawatts?

4 A. No. The indeterminate status, I  
5 believe, results from a -- and I believe this was  
6 discussed on Panel 6, that there had been some  
7 correspondence between Hydro and the government as to  
8 how to resolve the approval matters, and that that was  
9 still left in an unresolved state.

10 I don't know of that being resolved, and  
11 this document appears to indicate that it is still  
12 indetermine, the status of that.

13 Q. I guess my question, Mr. Snelson, is  
14 when a matter is unresolved in that way, how do you  
15 take that into account in drafting something like your  
16 Exhibit 796?

17 A. 796 assumes that the proposal can  
18 proceed on a later date, but recognizes that there are  
19 matters that have to be resolved before approval can be  
20 obtained and that won't be resolved in time certainly  
21 for construction of the station to begin in 1994, as  
22 indicated in the Order in Council.

23 Q. Thank you, Mr. Snelson.

24 Still on page 2, looking at the next  
25 heading, this is the Update, Exhibit 452. Under the

1 main features of the updated Demand/Supply Plan, Patten  
2 Post and Little Jackfish are not listed at all; they  
3 are, however, listed as associated with an illustrative  
4 approach to managing the potential capacity surplus;  
5 would you agree with that, Mr. Snelson?

6 Would you like me to refer you to the  
7 page in the Update? It is page 22 of Exhibit 452. Do  
8 you have that, Mr. Snelson?

9 A. Yes.

10 Q. Now, we see the updated Demand/Supply  
11 Plan A main features of the updated Demand/Supply Plan..

12 We drop down to the second last bullet  
13 there, we see: Proceeding with the Niagara development  
14 and the Mattagami extensions, hydraulic projects?

15 A. Yes.

16 Q. And then we look down a paragraph and  
17 we see the sentence: The following features of the  
18 updated Demand/Supply Plan are associateed with this  
19 illustrative approach to managing the potential  
20 capacity suplus.

21 And the last bullet tells us: Defer the  
22 installation of 920 megawatts of generation from units  
23 at Niagara; cancel Little Jackfish; defer Patten Post.

24 Do you see that?

25 A. Yes, I do.

1 [10:05 a.m.]

2 Q. So, Mr. Snelson, I have entered then  
3 on page 2, under Little Jackfish and cancel Little  
4 Jackfish, this is under the illustrative way of  
5 managing the surplus?

6 A. Yes.

7 Q. Now, I have entered as defer Patten  
8 Post to the year 2007. Now, actually, the year 2007 I  
9 saw in Exhibit 796 but I did not see a year associated  
10 with the deferral of Patten Post in Exhibit 452. Can  
11 you confirm that, Mr. Snelson?

12 MR. DALZIEL: A. I don't know if the  
13 date 2007 appears in Exhibit 452, associated with  
14 Patten Post, but it does appear in the materials for  
15 Panel 10, Exhibit 646.

16 Q. Okay. Well, perhaps we can just add  
17 that on as a notation there, that that's where it comes  
18 from. I just want to be clear it doesn't come from  
19 Exhibit 452, even though that's the reference document  
20 there.

21 Turning to, then, to page 3. Looking at  
22 the reference document, Exhibit 796, this is  
23 demand/supply planning development since Panel 10.  
24 This is the excerpt which shows us the assumed  
25 in-service dates from Mattagami, Niagara, Little



1 Jackfish, Patten Post and Ragged Chute, and there we  
2 see Patten Post as having a current assumed in-service  
3 date of 2011 and Little Jackfish as having an assumed  
4 in-service date of 2009; correct, Mr. Snelson?

5 MR. SNELSON: A. Yes.

6 Q. Okay. Now, with those dates in mind,  
7 and just to refer back to the dates, we are looking at  
8 Patten Post having been moved from not listed in  
9 chapter 19, to the year 2009, back to the year  
10 potentially 2000, then to 2007, then to 2011.

11 For Little Jackfish we have it moved from  
12 1996, to potentially cancelled, to 2009.

13 With those dates in mind, Mr. Snelson, I  
14 would like to refer you to Volume 151. Transcript  
15 Volume 151.

16 A. I have Volume 151.

17 Q. I would ask you to turn to page  
18 26778. And this is during cross-examination by MEA,  
19 Mr. Watson.

20 Do you have that page, Mr. Snelson?

21 A. Yes, I do.

22 Q. Looking at line 20 -- I am sorry, can  
23 we go back up to line 11 just to give us a lead-in  
24 here. You were asked by Mr. Watson, an indication that  
25 Little Jackfish is cancelled for the median load

1 forecast.

2 "Can you help us as to why it was  
3 cancelled as opposed to postponed?"

4 In your answer, starting at line 20, you  
5 state that:

6 "I understand that the considerations  
7 that went into that were that Little  
8 Jackfish is one of the least economic if  
9 not the least economic of the  
10 hydroelectric projects according to the  
11 cost/benefit ratios that were available  
12 at the time that this surplus management,  
13 illustrative surplus management was being  
14 decided upon. And that there has been  
15 some advice that if that project is  
16 stopped and shut down for a long period  
17 of time, then maybe we can't restart it.  
18 The reason for that is that it was  
19 started in the mid-1980s and shut down --  
20 in the early 1980s and shut down in the  
21 mid-1980s, we got everybody in the area  
22 interested in the project, we were going  
23 through public meetings and so on, and  
24 then we cancelled because of lack of  
25 need. And now the project is going

1 again, and if there was to be another  
2 off-again situation, then there have been  
3 views expressed in the organization that  
4 there would be difficulty in getting that  
5 project going again and convincing people  
6 that we were serious and that we weren't  
7 just playing around and wasting people's  
8 time."

9 Do you remember that comment, Mr.

10 Snelson?

11 A. Yes, I do.

12 Q. In determining the delay of the  
13 in-service date for Patten Post and to an extent the  
14 revival of Little Jackfish to the year 2009, there was  
15 no social impact analysis done, was there, on the  
16 effect of a further delay on those communities?

17 A. I don't know of a social impact  
18 analysis other than that associated with the project-  
19 specific environmental assessment.

20 Q. For the purpose of this hearing there  
21 was no social impact study done on the effects of  
22 further delays of hydroelectric projects on  
23 communities?

24 A. I don't know of any specific analysis  
25 in that regard.

1 Q. Would you tell me, would you  
2 undertake to tell me if you recall any that was done or  
3 are you telling me now that you don't think any was  
4 done for the purpose of preparing Exhibit 796 and  
5 determining that those would be your assumed new  
6 in-service dates for those projects. You are not aware  
7 of any social impact assessment done?

8 A. I am aware that some of the people in  
9 that area were consulted in that process, but I am not  
10 aware of a formal social impact assessment.

11 MR. B. CAMPBELL: Ms. Marlatt, I take it  
12 you are referring to anything that's in addition to the  
13 material already filed.

14 MS. MARLATT: Yes.

15 MR. B. CAMPBELL: Thank you.

16 MS. MARLATT: Q. So, for example, Mr.  
17 Snelson, there have been no studies that have been  
18 undertaken for the purpose of Exhibit 796, that  
19 considered the impact on these communities' own plans,  
20 other plans that have nothing to do with the  
21 hydroelectric projects but may be affected by them?  
22 You haven't looked at that, you haven't looked at what  
23 the impact of those deferrals will be on economic plans  
24 that the communities may have in place?

25 MR. SNELSON: A. I believe that we are

1 aware that there are potential impacts of deferring  
2 projects on the economics of the community, on the  
3 economic development in the communities affected.

4 Q. Have you documented any of those  
5 effects in Exhibit 796 or associated documents?

6 A. Well, going back to the paragraph  
7 that we were looking at just a little while ago, which  
8 is page 13 of attachment A to attachment A of Exhibit  
9 796 - if that isn't a redundancy - then there is  
10 recognition that deferral of projects such as Little  
11 Jackfish and Patten Post and Lake Gibson defers any  
12 regional economic benefits associated with the  
13 construction and operation of those projects. That's  
14 in the same paragraph that I referred to before on page  
15 13.

16 Q. And that doesn't refer to, of course,  
17 the uncertainty impact that you refer to in your own  
18 testimony?

19 A. No.

20 Q. The uncertainty on communities of  
21 having off-again/on-again projects?

22 A. No, it does not.

23 Q. Mr. Snelson, I would like to move  
24 into another area, and this is an area that you had  
25 some questions from AMPCO on this morning, so I am



1 going to see if I can reduce the length of my questions  
2 in the area, assuming that we agree on what it was that  
3 was said this morning.

4 Mr. Snelson, from your questions this  
5 morning and in your answers this morning, I presume  
6 that you would agree with me that in 1989 and in 1991,  
7 when the hearing began, you considered that you would  
8 need to submit project level EAs for approvals, that  
9 came out of any planning approvals from this Board,  
10 within five years of the date of those decisions.

11 A. Yes, and that was prefaced on the  
12 assumption that we would submit approvals in time to  
13 meet the upper band of the load forecast.

14 Q. All right. So for nuclear fossil  
15 fuel and the Manitoba Purchase, you had assumed that  
16 for all of those types of projects and for hydraulic,  
17 that you would be putting in project level assessments  
18 within five years, subject to the upper load, that was  
19 what you were planning on?

20 A. Within five years of the end of the  
21 planning hearing, yes.

22 Q. Mr. Snelson, was that the case in the  
23 Update?

24 MR. B. CAMPBELL: Just a minute. Mr.  
25 Chairman, I may need to make some distinction here.

1 Certainly for many of the projects that remain under  
2 consideration, my recollection is that the project  
3 applications had already been filed; it was not a  
4 matter of doing it in future, but in most cases they  
5 had already been filed. Just so we are clear.

6 MS. MARLATT: I'm not certain we are  
7 clear, Mr. Campbell.

8 MR. B. CAMPBELL: My understanding is  
9 that Little Jackfish, for instance, Niagara, Mattagami,  
10 project-specific environmental assessments, it was not  
11 a matter of after the end of this hearing; it was a  
12 matter that they have already been filed.

13 MS. MARLATT: Perhaps I could ask a  
14 question to clarify this.

15 THE CHAIRMAN: There is no dispute that  
16 there are project assessments filed for Little Jackfish  
17 and for Niagara and for the Mattagami extensions.

18 MS. MARLATT: No, but I am not actually  
19 asking questions about the specifics of certain  
20 projects. I am asking questions about the planning  
21 methodology that Mr. Snelson applied in setting out the  
22 Demand/Supply Plan. That's what my questions are  
23 about.

24 THE CHAIRMAN: Go ahead.

25 MS. MARLATT: Q. Mr. Snelson, let's use

1 a specific example here that might help all of us.

2 Let's take Patten Post, we have an in-service date now  
3 of 2011.

4 MR. SNELSON: A. Under median load  
5 growth, yes.

6 Q. In 1989 and in 1991, when we started  
7 this hearing, Patten Post would have been, according to  
8 your planning methodology, the type of project  
9 environmental assessment that would have been submitted  
10 within five years of a decision of this Board, in 19 --  
11 now, of course, in the DSP it was not listed, but let's  
12 just forget that for a moment and use it as an example.  
13 In its current form --

14 THE CHAIRMAN: I don't follow that,  
15 because Patten Post, unless I am mistaken, fell outside  
16 the five-year period as far as approvals were  
17 concerned; is that not correct?

18 MS. MARLATT: I would agree, Mr.  
19 Chairman. I am just trying to get an idea of the  
20 planning methodology he used in 1991 and then when the  
21 Update was done, and then again when Exhibit 796 was  
22 done. I am trying to follow it through using -- we  
23 don't even have to attach the word "Patten Post" to it.

24 Q. A hydraulic would have had to have  
25 had a project level environmental assessment submitted

1 within five years of a decision of this Board in your  
2 DSP; correct?

3 MR. SNELSON: A. That was the rule we  
4 used to decide on which of the projects within the 25  
5 years to seek approval of.

6 Q. So it was a significant part of your  
7 planning methodology in choosing your approvals?

8 A. It was significant in choosing the  
9 approvals, yes.

10 Q. The same type of significance or  
11 perhaps more significance as your demand management  
12 plan, your non-utility generation plan. Those were  
13 building blocks in determining how much power you  
14 required for your approvals; correct?

15 A. Well, they are also very important  
16 parts of our plan of things that we are planning to do.  
17 So that they are more than a methodology; they are an  
18 integral part of the plan.

19 Q. But they were a significant part of  
20 your planning methodology.

21 MR. B. CAMPBELL: Mr. Chairman, I am a  
22 little concerned. I don't really understand where this  
23 is going and why it hasn't already all been dealt with.

24 We were frank in Exhibit 3 about how the  
25 approvals were defined, it's well documented, it's been



1 discussed many times before this panel.

2 [10:20 p.m.]

3                   However, with respect to the hydraulic  
4 approvals the nature of approvals that were available  
5 to Ontario Hydro in this process was, at least in our  
6 submission, dramatically changed by ruling of the Board  
7 on the hydraulic motion, so that the approach to the  
8 approvals that is currently before the Board is a  
9 direct result of the ruling that the Board made, and I  
10 am unclear as to why all of this can't be said to have  
11 been ground that is covered unless my friend wishes to  
12 draw some point with respect to the current situation.

13                   I am not at all clear how it is possible  
14 to get from there to there (indicating).

15                   MS. MARLATT: Mr. Chairman, the hydraulic  
16 approvals were requested by this Board to be changed in  
17 accordance with your ruling, and after that the Update  
18 was issued - after that. In the Update there was  
19 reference to the five-year action plan. And in  
20 submissions given as part of the introduction of that  
21 Update by Ontario Hydro's counsel, Mr. Howard, there is  
22 reference again to the five-year action plan.

23                   Now, I would submit that those references  
24 are after the changes to the hydraulic approvals, and,  
25 therefore, the five-year action plan was still an



1 active part of Ontario Hydro's methodology at that  
2 time. I would like to know what happened to it.

3 THE CHAIRMAN: Well, I don't quite  
4 follow. I agree with you up to that, but I don't know  
5 what you mean. What change? What do you say has  
6 changed? That is what I am having trouble following.

7 MS. MARLATT: It would be my submissions  
8 that if the five-year action plan was still in place in  
9 Exhibit 796 then Patten Post simply could not be even  
10 inserted in those documents because the 2011 period  
11 would have to take it outside of a five-year action  
12 plan. This was discussed as part of nuclear --

13 THE CHAIRMAN: No, no. But just a  
14 moment.

15 All that is being asked for in this  
16 hearing is a range of hydraulic. Now, they have been  
17 asked on many, many occasions whether they need all  
18 that hydraulic within the five-year period, and they  
19 have replied to that from other cross-examiners, if  
20 that is the issue.

21 But there is no such -- all this  
22 cross-examination up to now has been quite site  
23 specific. I haven't tried to interrupt it because I  
24 thought perhaps it was getting to some point; I didn't  
25 quite appreciate what it was.

1 But we are not here deal with Little  
2 Jackfish and Patten Post specifically. We are dealing  
3 with the requirement and need for a range of hydraulic  
4 wherever.

5 MS. MARLATT: I am very aware of that,  
6 Mr. Chairman. However, the essence of this planning  
7 hearing is that when we leave this planning hearing we  
8 know where we are going towards the project level  
9 environmental assessments.

10 There has to be some connection between  
11 the decision of this Planning Board and the project  
12 level assessments. If there is not, Mr. Chairman,  
13 there is no way the communities I represent can follow  
14 what the impact of the approvals that you are going to  
15 give will have on the projects that will directly  
16 affect them.

17 In that way, I submit, that that  
18 site-specific information is important to follow, the  
19 connection between a planning level approval and a  
20 site-specific approval.

21 I am not talking about what will be  
22 within the site-specific approval. I am talking about  
23 the connection between the two.

24 THE CHAIRMAN: But these plans up to now  
25 are all illustrative. If they get approval for a range

1 of hydraulic from us then they may or may not submit an  
2 EA for Patten Post.

3 MS. MARLATT: If Mr. Snelson was to tell  
4 me that as of today it is their planning methodology  
5 and it is their plans that an approval from you,  
6 approval from this Board for 1,400 to 1,800 megawatts  
7 of hydraulic approval means that within five years they  
8 are going to submit a project level EA for anything  
9 that they want to get out of that approval, then I will  
10 accept that and those are the end of my questions.

11 If, however, that is not his evidence I  
12 think I have the right to question him on why and when  
13 it changed.

14 MR. B. CAMPBELL: Well, Mr. Chairman, we  
15 have not and it is not our position that there is such  
16 a time period attached to the hydraulic approval, nor  
17 was it our position that that was the case in arriving  
18 at the 1,400 to 1,800 megawatts which were contemplated  
19 during the course of Panel 6.

20 In light of the Board's ruling the nature  
21 of the request for the approval was brought into  
22 conformity with that and how the 1,400 to 1,800  
23 megawatt figure was arrived at - and it included things  
24 which were -- I think it goes out right to Ragged  
25 Chute, well beyond anything that might be contemplated

1 under this five-year rule, and it has all been dealt  
2 with in Panel 6, in my submission. Mr. Snelson has  
3 said time and time again that there is no change to  
4 that.

5 MS. PATTERSON: Mr. Campbell, from my  
6 perspective there was a five-year rule and now you are  
7 saying there isn't one and that is totally clear.  
8 Well, it is not clear to me. So I personally would  
9 like to hear Ms. Marlatt's questions.

10 MR. B. CAMPBELL: I will sit down.

11 MS. MARLATT: Q. All right, Mr. Snelson.  
12 I am going to start with assuming that you and I will  
13 agree on the following.

14 Exhibit 3, the approvals you sought as  
15 part of Exhibit 3, you intended for all of those  
16 approvals - hydraulic, fossil, nuclear, Manitoba  
17 Purchase - for all of those approvals and associated  
18 transmission you would be submitting project level EAs  
19 within five years.

20 MR. SNELSON: A. Under the upper load  
21 growth scenario, yes.

22 Q. Fine. Let's move on to Exhibit 452.

23 I would like to refer you directly to  
24 page 32 of that exhibit, second paragraph, first  
25 sentence:

1 Approvals continue to be sought based  
2 on an action plan which includes the  
3 facilities for which a project  
4 environmental assessment document is  
5 expected to be submitted within a  
6 five-year period from the Environmental  
7 Assessment Board decision.

8 Do you see that sentence, Mr. Snelson?

9 A. Yes.

10 Q. All right. So as of the date of this  
11 document you considered that all the approvals you were  
12 seeking, and at that point that was the Manitoba  
13 Purchase and hydraulic approvals, were sought based on  
14 an action plan which includes the facilities for which  
15 a project environmental assessment document is expected  
16 to be submitted within a five-year period; correct, Mr.  
17 Snelson?

18 A. Can you repeat the question? I have  
19 been reading the context to trying and--

20 Q. That's fine.

21 A. --put that sentence into context.

22 Q. This is your document; correct?

23 A. Yes.

24 Q. This is your document, I mean, you  
25 drafted this document.



1 All right. As of Exhibit 452, the  
2 approvals you were requesting were hydraulic and  
3 Manitoba Purchase; correct?

4 A. Yes.

5 Q. All right. So what I am asking is at  
6 that time we could have inserted the term, say,  
7 hydraulic and Manitoba Purchase approvals continue to  
8 be sought based on an action plan, which includes the  
9 facilities, the hydraulic and Manitoba Purchase  
10 facilities, for which a project environmental  
11 assessment document is expected to be submitted within  
12 a five-year period.

13 The sentence should be capable of being  
14 read that way; correct? Those are the approvals you  
15 were seeking at the time of that document?

16 A. Those were the approvals we were  
17 seeking at that time.

18 Q. All right. So would you agree with  
19 me then the way in which I just read it should make  
20 sense to you; that is what you meant?

21 A. That is what the words appear to say,  
22 yes.

23 Q. Mr. Snelson, was that your planning  
24 methodology at the time you produced this document?

25 A. The only point that is causing me

1 some difficulty here is the change from the  
2 site-specific nature of the approvals to the range of  
3 approvals.

4 Q. Mr. Snelson --

5 A. And the primary purpose, I believe,  
6 of the paragraph is to explain why major supply  
7 approvals are not being sought, rather than to explain  
8 why hydraulic approvals are continuing to be sought.

9 Q. Really? Oh. Well, Mr. Snelson, was  
10 not the scoping ruling and the decision by this Board  
11 about the hydraulic approvals in 1991, November/  
12 December, 1991?

13 A. Yes.

14 Q. This document was written in '92.

15 A. That is correct.

16 Q. After that decision?

17 A. Sorry, this document was written in  
18 late '91 and published in early '92.

19 Q. But you gave it to this Board and to  
20 us--

21 A. Yes.

22 Q. --in '92?

23 A. That's correct.

24 Q. After we had all read the decision?

25 A. Yes.

1 MR. B. CAMPBELL: And with respect, Mr.  
2 Chairman, my friend should recognize that the method  
3 for arriving at the range for the hydraulic options is  
4 given in the document, it is given at page 11, and it  
5 is precisely the basis for the approvals that were  
6 requested. It is explained right there according to  
7 the Board's ruling.

8 MS. MARLATT: Mr. Chairman, that is  
9 interesting, but that is not my point.

10 My point is not about how the range was  
11 arrived at. My point is the planning methodology  
12 behind how Mr. Snelson considered his approvals and  
13 considered which approvals he was going to be  
14 requesting in this document.

15 It was my understanding that they used  
16 the five-year action plan as one of the ways that he  
17 determined what approvals they should be asking for. I  
18 don't think the range has anything to do with it. I  
19 don't even think the way in which they worded the  
20 approval has anything to do with it. This is a  
21 different issue.

22 THE CHAIRMAN: Let Ms. Marlatt continue  
23 with her questioning.

24 MS. MARLATT: Q. Now, Mr. Snelson, you  
25 had just mentioned something about the major supply

1       approvals. There is nothing in this sentence that  
2       refers to major supply approvals, is there.

3                   MR. SNELSON: A. No, but if you read the  
4       whole paragraph you will see that the final point of  
5       the paragraph is with respect to the need for major  
6       supply.

7                   Q. Are you saying then that the last  
8       sentence of the paragraph,

9                   These options would be required in  
10       the event that future forecasts of  
11       consumer demand exceed the current median  
12       forecast to such an extent that approvals  
13       for major new supply could not be  
14       obtained in time to provide the  
15       additional power.

16       That sentence in fact is the conditional statement in  
17       the first part of that paragraph?

18                  A. I think you have to read the whole  
19       paragraph.

20                  Q. All right.

21                  A. The whole paragraph starts from a  
22       discussion of the action plan five-year period, and it  
23       discusses whether or not approvals are required under  
24       upper load forecast, it talks about the substantial  
25       deferral of need dates for new generation and the

1 availability of short lead time options, such as oil  
2 and gas. It is all a paragraph that is referring to  
3 major supply options and short lead time oil and gas  
4 options.

5 Q. Mr. Snelson, at the time of this  
6 document the only approvals that you were continuing to  
7 seek were hydraulic and Manitoba Purchase; correct?

8 A. That is correct.

9 Q. All right. Moving on to the time  
10 period after the release of Exhibit 796 and the  
11 testimony of Panel 11 in direct you were questioned by  
12 the Municipal Electric Association again on the  
13 five-year action plan -- and this is at page -- sorry,  
14 Volume 177 of the transcripts, page 30836.

15 THE CHAIRMAN: I'm sorry, could you give  
16 me the number again, please?

17 MS. MARLATT: Transcript Volume 177, page  
18 30836.

19 Q. Do you have that reference, Mr.  
20 Snelson?

21 MR. SNELSON: A. Yes.

22 Q. I would like you to look at line 6:

23 QUESTION: And the five-year action  
24 plan is still a feature of Hydro's  
25 planning process?



1 MR. SNELSON: ANSWER: We haven't made  
2 any change in that regard.

3 Do you see that?

4 [10:35 a.m.]

5 A. Yes. And that was, I believe, with  
6 respect -- the discussion at that time was with regard  
7 to why we were not seeking approval for major supply  
8 options.

9 THE CHAIRMAN: But there has never been  
10 any suggestion that the 5-year action plan didn't apply  
11 to the hydraulic range approvals that I have ever heard  
12 before -- is that not right, Mr. Snelson? There has  
13 never been any suggestion of that.

14 If there is, well, why don't you tell us  
15 about it? If my understanding is not correct, tell me  
16 what it is.

17 MR. SNELSON: The range of hydraulic  
18 approvals was defined by Panel 6 by working down from  
19 the total hydraulic potential of the province, and that  
20 led to a certain range of capacity and energy. And  
21 that was without specifically basing it upon  
22 project-specific evidence.

23 That is consistent with some of the  
24 specific projects that are proceeding and some of those  
25 already have environmental assessments submitted, and

1 others will have to be submitted in the future, such as  
2 Patten Post and Ragged Chute, if those are the projects  
3 that are within the range.

4 And it is quite possible that  
5 environmental assessments will be submitted with the --  
6 for the remaining ones, within five years, it is  
7 possible it may go beyond the five years. It depends  
8 upon the path of the load forecast and the needs seen  
9 in the future. It's one of the flexibilities available  
10 to us.

11 THE CHAIRMAN: What you are saying is  
12 that the 5-year action plan does not apply to the  
13 hydraulic range approvals.

14 MR. SNELSON: I'm trying to recall the  
15 specific way in which it was defined in Panel 6 by Ms.  
16 Basu-Roy, but my recollection is that it was working  
17 down from the total potential for the province and that  
18 this was a reasonable range to be developed within a  
19 25-year period.

20 THE CHAIRMAN: There you are.

21 MS. MARLATT: Q. Mr. Snelson, are you  
22 telling me, then, that your 5-year action plan does not  
23 mean that there will be project level assessments  
24 submitted within five years of a decision of this Board  
25 on all of the hydraulic potential within that range,

1 1,400 to 1,800 megawatts? That's your interpretation  
2 right now.

3 MR. SNELSON: A. As of the time of the  
4 Demand/Supply Plan we could not have given you an  
5 assurance that environmental assessments would be  
6 submitted for all of the things for which we were  
7 seeking approval within five years, because the  
8 five-year period was predicated on upper load growth.  
9 So if load growth had taken median path, then some of  
10 the environmental assessments would not have been  
11 submitted probably within five years.

12 I'm sorry. That maybe doesn't quite  
13 answer your question.

14 Q. No. In fact, it seems to change your  
15 previous answer, but I could be wrong.

16 In the DSP, then, the five-year action  
17 plan did not under all load growths apply to the  
18 hydraulic approvals; is that not what you just said,  
19 Mr. Snelson?

20 A. In the DSP? I'm sorry, are we  
21 talking about the DSP or the DSP Update?

22 Q. I am talking about the DSP right now.

23 A. Yes.

24 Q. In all load - upper, median, low - it  
25 did not apply to the hydraulic approvals?

1 A. The 5-year action plan?

2 Q. Yes.

3 A. In the DSP, the 5-year action plan  
4 did apply to the hydraulic approvals.

5 Q. Under all load growths, regardless of  
6 whether you ended up with a median, upper or lower?

7 MR. B. CAMPBELL: Well, Mr. Chairman --

8 THE CHAIRMAN: I'm not sure what this is  
9 all about.

10 It seems to me that what Mr. Snelson has  
11 said is that they may, within the five-year period,  
12 apply for site-specific within the range that may be  
13 approved, and that they may not; and later on they may  
14 make some more applications, and that is up to them.

15 Even if they get approvals, whether they  
16 act on them or not is still in their discretion. So I  
17 am not quite sure what all this helps us.

18 MS. MARLATT: Mr. Chairman, it will be my  
19 submission that they may not -- whether or not they  
20 choose to act on any of those or fourteen or hundred --  
21 1,400 to 1,800 megawatts within their five-year period,  
22 I would agree with you, is up to them. But whether or  
23 not they choose to go outside of that five-year period  
24 is up to you, and it is up to Hydro to tell you for  
25 sure whether or not that is part of their planning

1 methodology in choosing those hydraulic approvals, and  
2 then it is up to you to confirm that or not in your  
3 ruling.

4 But to not know that creates a tremendous  
5 difficulty for my clients. The "may" word is simply  
6 not appropriate I would submit.

7 THE CHAIRMAN: Well, I think it is still  
8 up to them, and I think Mr. Snelson has answered your  
9 questions.

10 I mean, I don't know what more you can  
11 get from him. You may not be happy about it, but I  
12 don't think you are going to get any more.

13 MS. MARLATT: Well, then, those are all  
14 my questions.

15 THE CHAIRMAN: Right. And we will take  
16 the morning break, fifteen minutes.

17 THE REGISTRAR: Please come to order.

18 The hearing will take a fifteen minute recess.

19 ---Recess at 10:42 a.m.

20 ---On resuming at 11:09 a.m.

21 THE REGISTRAR: Please come to order.

22 This hearing is again in session. Please be seated.

23 THE CHAIRMAN: Mr. Heintzman?

24 MR. HEINTZMAN: Thank you. Mr. Chairman,  
25 I have Charles Birchall of our firm with me to help me



1 on my way, and I would like to thank Mr. Mattson for  
2 accommodating us and other parties for accommodating us  
3 and permitting us to examine today.

4 CROSS-EXAMINATION BY MR. HEINTZMAN:

5 Q. Panel, I would like to start off, and  
6 maybe Mr. Burke is the person that these questions will  
7 interest most, by trying to understand better, if I  
8 can, the amount of new supply that will be required in  
9 the year 2010 based upon the changes that are now  
10 contained in the December 1992 forecast and the  
11 cancellation of the Manitoba Purchase.

12 And what I will do is I will state the  
13 proposition as I understand it and where I get it from,  
14 and then if we need to, we can look at the documents.

15 But as I understand it, in 2010 at the  
16 median load forecast, the primary load forecast -- and  
17 what I am doing is comparing page 9-2 of Exhibit 3 with  
18 attachment C to Exhibit 796, particularly looking at  
19 pages 129 and 130 of attachment C to Exhibit 796 where  
20 the bands are set forth as now projected in the  
21 December 1992 load forecast.

22 And just comparing where we were in the  
23 DSP with where we are now.

24 MR. BURKE: A. Sorry, what was the  
25 reference in the DSP again? Nine --

1 Q. Page 9-2.

2 A. Yes, I have that.

3 Q. And looking at 2010, which is the  
4 reference point that I have chosen to use, being the  
5 date of new supply as called for under the December  
6 1992 forecast, in 2010 in the DSP we were looking at 33  
7 gigawatts as being the peak power demand, and we are  
8 now looking at, in 19 -- that's for the primary, and on  
9 page 130 of attachment C to Exhibit 796, we are looking  
10 at 29.4 as the peak power demand in 2010.

11 So we are basically looking at a  
12 difference of 3.6 gigawatts from the DSP to the present  
13 plan at the median, assuming the accuracy of Hydro's  
14 forecasts.

15 A. The only thing I am checking is that  
16 the table in the DSP Update, it refers to a January  
17 20-minute peak, and the data that's included in the  
18 load forecast is a December one-hour peak for that  
19 year, but you will find in the monthly tables in  
20 appendix 1 of attachment C, the monthly values; and for  
21 the year 2010 I don't think it makes a big difference  
22 which you use.

23 Q. Well, I was doing the calculations  
24 subtracting out the changes in demand management and  
25 all the ingredients and I was coming up with different

1 numbers, either 3.4, 3.5 or 3.6 as being the difference  
2 between the two, it is something in that order of  
3 magnitude, is...

4 A. Yes. Something--

5 Q. Right.

6 A. --like that.

7 Q. And if we do the same with respect to  
8 the upper load forecast, we have in the DSP a figure of  
9 37.4 gigawatts as the load that is required for the  
10 system; and in the December 1992 plan it's 35.9 taken  
11 from page 130 of attachment C to Exhibit 796 for a  
12 difference of 1.5 gigawatts?

13 A. Yes. And here we are comparing  
14 apples and oranges because there was a long discussion  
15 in Panel 1 about the change in the uncertainty bands  
16 between the submission at the DSP and the 1990 load  
17 forecast; so subject to that you can make the  
18 comparison, but it's not exactly the same formulation  
19 of the bandwidth in this forecast which uses the 1990  
20 approach versus what was actually used at the time of  
21 the DSP.

22 Q. But they were both used for planning  
23 purposes to the upper, to the extent that the upper is  
24 referenced in either document. Those are the  
25 comparisons that you would find?

1 A. Yes, that is true.

2 Q. Now, if you then take account of the  
3 absence of the Manitoba Purchase, in the sense that we  
4 had 1,000 megawatts that was supplying that difference  
5 of 3.6 -- 3.4, -5 or -6, somewhere in that vicinity at  
6 the median, or 1.5 gigawatts at the upper, would I be  
7 correct in saying that, in effect, the difference, if  
8 you take out that supply that's now not there, and  
9 therefore you are trying to compare what is necessary  
10 to meet that demand, that in effect the difference is  
11 3.6 or -5 or -4 minus 1,000, or 2.6 or 2.4 or 2.5 or  
12 2.6 is the difference in needed supply to meet the peak  
13 demand under the Update as opposed to now?

14 A. Well, I don't think I am the right  
15 person to answer that question.

16 MR. DALZIEL: A. I will accept the  
17 differences, but could you just state the question one  
18 more time again?

19 Q. Yes. We now do not have or you are  
20 not counting on the 1,000 megawatts from Manitoba?

21 A. That's right.

22 Q. You were counting on that to meet the  
23 demand in the DSP, it is not there now; therefore, the  
24 real difference between the two plans is about 2,500  
25 megawatts at the median or about 500 megawatts at the

1 upper.

2 A. Yes.

3 Q. Right. Now, if you take 500  
4 megawatts and you go forward 18 years, I suggest to you  
5 that at the upper, 500 megawatts is not a large amount,  
6 that really at the upper we are almost in exactly the  
7 same position now as we were when you add and subtract  
8 all the things that have occurred in the meantime as we  
9 were under the DSP.

10 [11:15 a.m.]

11 A. Are you saying that the 500 megawatts  
12 under the upper, looking out to the the year 2010 is  
13 not a material difference?

14 Q. It's not the material difference,  
15 that's right?

16 A. I would agree.

17 Q. Yes. And at the median we are at a  
18 number of about 2,500 megawatts which, having regard to  
19 the load that will be on the system, then, of somewhere  
20 around 30 gigawatts, 29.4 gigawatts, we are talking  
21 somewhere between 7 to 9 per cent of the system is the  
22 difference between what we now have and what we had  
23 under the DSP?

24 A. Yes.

25 Q. Yes, which again is not a large



1 difference between where we now are because of the  
2 things that have changed on each side of the equation  
3 from where we were under the DSP.

4 A. Which kind of changes, you mean the  
5 changes in the NUGs?

6 Q. Well, demand you forecasted to go  
7 down, you forecasted demand management to go down, we  
8 don't have the Manitoba Purchase, we have things going  
9 down on each side of the equation, the net result of  
10 which is to leave us in a very similar situation to  
11 where we were in the original DSP?

12 A. Yes.

13 Q. Yes.

14 MR. SNELSON: A. I think there are other  
15 changes that are significant that affect that, it's a  
16 very simplistic view of it.

17 Q. Exactly. We have got changes in  
18 electricity efficiency, we have got changes in fuel  
19 switching, we have got changes in load displacement  
20 NUGs. I was going to go through all those factors, but  
21 the net result is the one that I described.

22 A. Yes, we have other changes in the  
23 supply side that are not reflected in that.

24 Q. Yes.

25 Now, two other differences that we can

1 observe in the present situation as opposed to the DSP,  
2 is, first of all, the one that has been examined upon  
3 this morning, that is the deferral of the hydraulic  
4 plants from sometime in the mid 1990s to now we are  
5 looking at periods between 2008 and 2011.

6 A. Some hydraulic has been deferred.

7 Q. Yes. And I suggest that the other  
8 major difference that accounts for what is occurring  
9 here is that you have inserted into the plan a major  
10 component of new CTUs in the early 2000 year period  
11 over that which was provided for in the DSP.

12 A. Are you talking about median load  
13 growth?

14 Q. I am talking about median load  
15 growth, yes. That's the only thing that you have  
16 traced.

17 MR. DALZIEL: A. You mentioned CTUs in  
18 the early 2000s.

19 Q. Yes.

20 A. I don't understand what you mean by  
21 that.

22 Q. Well, let's look at page 16 of  
23 Exhibit 937.

24 A. I have that.

25 Q. There we can see before what you call

1 base load, and this is figure 10-2, which illustrates  
2 the major new supply plan, that's what it is, arising  
3 out of the December 1992 load forecast and planning  
4 scenario.

5 A. Yes.

6 Q. We can see there that before any base  
7 load, as it's called in this diagram, comes on, you  
8 have some 2,288 megawatts of CTUs.

9 A. Yes, around the year 2010. I thought  
10 earlier you meant around the year 2000.

11 Q. Well, we will come to exactly when  
12 that is being brought on, but a major allocation of  
13 CTUs has been inserted before or at the time of any  
14 base load coming on.

15 A. By one year. There are 1,344  
16 megawatts of CTUs being indicated coming into service  
17 the year 2010, and the following years, the first unit  
18 of a base load station coming into service.

19 Q. Yes. And in the, looks likes  
20 six-and-a half to seven years of new major supply  
21 between about 2010 and 2016 or so, there is 4,032  
22 megawatts of CTUs in your plan now, out of a total of  
23 10,688.

24 A. It is about - I forget the number you  
25 just mentioned - about 4,000 megawatts of CTUs?

1 Q. 4,032 by my addition of all the CTUs  
2 shown their out of a total of 10,688 of total new  
3 generation shown on that page.

4 A. Yes.

5 Q. And I suggest to you that that's a  
6 radically different allocation of CTUs than if we look  
7 at, and we can, if you want to, the pages in the DSP,  
8 page 15-11, for instance, where the number of CTUs is  
9 radically less than shown there.

10 MR. B. CAMPBELL: Mr. Heintzman, you are  
11 looking at page 15-10 and 15-11; is that correct?

12 MR. HEINTZMAN: Yes, Case 15 in the DSP.

13 MR. B. CAMPBELL: Which is load growth.

14 MR. HEINTZMAN: I am looking at either  
15 the lower or the median.

16 Q. There is a lesser number of CTUs  
17 provided in either the lower or median load growth  
18 before major new supply of base load?

19 MR. DALZIEL: A. Before the first base  
20 load units come into service?

21 Q. Yes.

22 A. Yes, there is a lesser amount.

23 No, sorry. Actually, it appears to me to  
24 be the same amount.

25 Q. I look at the first --

1 A. I am on page 15-11.

2 Q. Yes, so am I.

3 A. I am looking at median load forecast,  
4 and under the years 2001, 2002, there are CTUs of 336,  
5 672, 336, and I think that adds up to 1,344.

6 Q. Right. And then we have a major new  
7 supply of 881 in year 2003, no CTUs. And we have a  
8 construction of four base load plants in 2002 to 2006.

9 A. Yes.

10 Q. So that I am suggesting to you that  
11 the composition of what you were providing for then in  
12 terms of CTUs vis-a-vis base load plants, had a  
13 different composition; you have now percentage-wise  
14 more CTUs than you were providing for under the median  
15 load forecast in the DSP?

16 A. I will accept that, yes.

17 Q. And the same applies, which maybe is  
18 a better comparison since we are tracking, as I  
19 understand it, from Panel 10, the low load forecast,  
20 the same situation basically pertains under the low  
21 load forecast. So we have our first base load coming  
22 on in 2009, and in the year before that we only have  
23 672 megawatts of CTUs.

24 A. That was described for the lower load  
25 forecast in page 15-11. We are not quite tracking the



1 lower load right now.

2 MR. B. CAMPBELL: Just a minute. With  
3 respect, Mr. Heintzman, I think it is also fair to  
4 point out that they are in the same year as the first  
5 unit of the first CANDU station. There is another  
6 substantial block of CTUs if we are actually going to  
7 make this comparison.

8 MR. HEINTZMAN: I appreciate that and the  
9 witness can provide us with that answer if he thinks  
10 it's relevant.

11 Q. Now, we can mathematically do the  
12 calculations. I suggest that the percentageage of CTUs  
13 is greater now over the plan period between 2009 to  
14 2016. The CTUs are coming on earlier, et cetera. That  
15 seems to be evident from a comparison of the two plans.

16 MR. DALZIEL: A. I am just looking at  
17 the figure on the preceding page, 15-9. This allows  
18 maybe for a little quicker visual comparison. The CTUs  
19 are the brown colour and the CANDUs are shown as the  
20 more yellow colour. You can get a sense of the  
21 fraction or the proportion of CTUs to base load from  
22 that figure. We have already established that in  
23 Exhibit 937 we have about 40 per cent of the new supply  
24 is CTUs and about 60 per cent is base load.

25 Q. You can look on the page 15-8, it's

1 easier to look at because it tells us right there that  
2 4.4 out of 15 gigawatts is going to be CTUs, for 5.14,  
3 I guess. So it's about a third or less than a third  
4 are going to be CTUs under the Plan 15 as opposed to  
5 over 40 per cent now.

6 A. So if it's about a third, it's 33 per  
7 cent in Plan 15.

8 Q. Yes. Now, I suggest to you that, Mr.  
9 Dalziel, and I don't want to review the  
10 cross-examination that we enjoyed in Panel 10, but you  
11 will recall saying that the reason we have got major  
12 new supply coming on in 2009 is because Hydro has a  
13 view of the world that it will not start major new  
14 supply, that is between nuclear and major base load  
15 stations, until 1999, and that's written in stone and  
16 these plans all reflect that. You recall our  
17 discussion on that.

18 A. I recall a discussion.

19 Q. I suggest to you that the reason that  
20 we have these early CTUs is because Hydro has  
21 constructed this December 1992 plan with that as sort  
22 of written in stone and therefore has met the needed  
23 supply in the earlier period by CTUs, or by other  
24 mechanisms. Isn't that, in effect, what is happening  
25 here?

1 A. I don't think so, no.

2 Q. Well the only constant that you see  
3 through it, everything has changed. I could have gone  
4 through the factors, but on every side of the equation  
5 everything has changed between now and the DSP, and  
6 particularly now and the Update, but what is constant  
7 between the present situation and the Update is the  
8 major new supply starts in 2009; right?

9 A. Yes.

10 Q. And as you said in Panel 10, the  
11 reason that major new supply starts in 2010 or 2009 is  
12 because we are not going to do anything until 1999, and  
13 that's the fundamental premise of the plan?

14 A. The need for new major supply hasn't  
15 changed appreciably. It was described as being 2009 to  
16 2011 in Exhibit 452, and I think we gave evidence here  
17 that the need date is around 2009 in Exhibit 796 and  
18 also shown in Exhibit 937.

19 So the timing or the need for new major  
20 supply is about the same time period. And providing  
21 for new major supply requirements around the year 2010,  
22 we have CTUs or base load plant coming into service.  
23 That's not different from Panel 10.

24 Q. But in Panel 10, sir, you told me  
25 that the basic planning assumption was that nothing was

1 to be done about base load supply until 1999. That's  
2 what you told me and I can give you the page references  
3 if you want to have a look at it.

4 A. It would depend on which option. It  
5 could be later for IGCC, it could be later for CTUs.

6 Q. But nothing was to be done before,  
7 1999 which was the five years of a planning period plus  
8 one year after the thought completion of this Board's  
9 hearing; right?

10 MR. B. CAMPBELL: Mr. Chairman, that is  
11 not my recollection of the evidence.

12 THE CHAIRMAN: I think, Mr. Dalziel, you  
13 can answer the question to the best of your  
14 recollection. Mr. Heintzman has offered to give the  
15 quotation if he wants it.

16 MR. DALZIEL: Yes, I wouldn't mind the  
17 transcript quotation.

18 MR. HEINTZMAN: Q. Why don't you have a  
19 look at the evidence, you can look at it over lunch if  
20 you want to, on June 1st which is Volume 154, pages  
21 pages 27260, 27381 to -3, and at Volume 155, 27389.  
22 And you have might also want to look at page - I think  
23 this is Mr. Snelson's evidence - at page 27021 and  
24 27144 through 27146.  
25 [11:36 a.m.]

1                   As I understood your evidence at that  
2 point was that these plans were constructed on the  
3 basis that no new major supply would be started  
4 until -- sorry, base load supply would be started until  
5 1999. That was the fundamental premise. As a matter  
6 of fact, that's correct, isn't it?

7                   MR. B. CAMPBELL: Well, what is correct,  
8 that that is the premise?

9                   MR. HEINTZMAN: That that is the premise.

10                  MR. B. CAMPBELL: Or that that is the  
11 date which falls out of the numbers?

12                  MR. HEINTZMAN: Q. No, that that is the  
13 premise upon which Hydro constructed the Update  
14 particularly was that no new base load supply would be  
15 started until 1999?

16                  MR. DALZIEL: A. I do recall that that  
17 is reflected in the details of the Panel 10 witness  
18 statement, Exhibit 646.

19                  Q. Right. And that that necessarily  
20 resulted in the first major base load supply coming on  
21 in 2009, which was that the date shown in the Update?

22                  A. Yes.

23                  Q. Right. Now, I am suggesting to you  
24 that what flows out of all of this is that Hydro has  
25 provided for CTUs to meet any supply that may be



1 necessary in the interim.

2 A. In the interim? What is the  
3 'interim'?

4 Q. Being between now and 2009.

5 A. Well, we don't show new major supply  
6 facilities before 2009/2010.

7 Q. But your whole planning philosophy is  
8 that if you need more supply you are going to move  
9 those CTUs. That is what your planning philosophy  
10 stated in the Update, and I take it it applies today,  
11 that you are going to move those CTUs forward if  
12 necessary to meet that supply need.

13 A. Now I understand your question. And  
14 we would rely on the response portfolio that was  
15 described during Panel 10, and that may include CTUs.

16 Q. It does include CTUs virtually  
17 entirely?

18 A. No.

19 Q. What else?

20 A. Non-utility generation.

21 Q. Anything else?

22 A. Could be additional purchases in that  
23 time period. They might be short-term, not long-term  
24 purchases.

25 Q. But it doesn't include the

1 construction of any major base load supply. That was  
2 evident from Panel 10.

3 A. It could include the construction of  
4 an IGCC facility before 2009 and -10.

5 Q. We will come to that. Okay. It  
6 could include that; is that what you are saying?

7 A. Yes, and I believe that was indicated  
8 in some of the load and capacity tables, again included  
9 in Exhibit 646, the Panel 10 evidence.

10 Q. But if we apply page 16 of Exhibit  
11 937 the way this plan would address the need for supply  
12 before the period shown there is to advance the CTUs;  
13 is that not fair?

14 A. Well, that would be one component.

15 Q. That would be the way, would it not,  
16 that you would address supply requirements before 2009?

17 A. Well, I think I just described how  
18 the supply requirements could be met before 2009.

19 Q. Now, dealing with that point, and I  
20 don't want to go over what everybody else has covered  
21 with respect to the hydraulic projects, but as I  
22 understand the situation with respect to hydraulic  
23 projects - and I'm not sure which of you would answer  
24 this question - but the commencement date with respect  
25 to the deferred hydraulic projects means that they

1 would not be commenced, nothing would be done between  
2 now and 2000 and about 2003. Is that a correct reading  
3 of the situation, 10 years from 1993?

4 MR. B. CAMPBELL: Well, Mr. Chairman,  
5 look. Is my friend talking about starting  
6 construction? Because in terms of filing environmental  
7 assessments, that work has been done or is being done.

8 MR. HEINTZMAN: Well, that's true. But  
9 as I read the document that --

10 THE CHAIRMAN: What do you mean by  
11 'nothing being done'. I guess that is what --

12 MR. B. CAMPBELL: Yes.

13 MR. HEINTZMAN: The acquisition phase not  
14 commencing.

15 MR. B. CAMPBELL: What is the  
16 acquisition...

17 MR. SNELSON: The acquisition phase would  
18 commence upon the commitment of the project for  
19 construction, and that would be an appropriate lead  
20 time in front of the in-service date, and for different  
21 projects that would be at different times. Now --

22 MR. HEINTZMAN: Q. Yes? And we saw the  
23 in-service dates in the document between 2008 and 2011,  
24 and therefore, applying the appropriate definition and  
25 acquisition periods am I correct that no work is going

1 to be done with respect to the projects until somewhere  
2 around 2003?

3 MR. SNELSON: A. Well, there is work  
4 that takes place prior to the acquisition phase to  
5 obtain an environmental assessment, to do preliminary  
6 engineering. So there is work under way on some of  
7 those projects now.

8 Q. Well --

9 MR. B. CAMPBELL: Mr. Chairman, I think  
10 to be fair it is not correct to say that all of the  
11 hydraulic in-service dates are beyond 2008. I thought  
12 we had been through that this morning. Mattagami and  
13 Beck are certainly earlier than that.

14 MR. HEINTZMAN: Q. Well, let's turn to  
15 attachment H to Exhibit 796.

16 Looking at Little Jackfish we are talking  
17 about deferring something for 10 years and we are  
18 talking about doing minimal work, I think is the word  
19 on the fourth last line, until the project really  
20 commences, if I can call it that.

21 Have I got that right, Mr. Snelson or Mr.  
22 Dalziel?

23 MR. SNELSON: A. I'm not quite sure  
24 where you get the 'really commences' part of it.

25 Q. Well, it says:

1                   And because there may be opportunity  
2                   to obtain an EA approval with a 10-year  
3                   shelf life with minimum work by Hydro an  
4                   allowance for this minimum work should be  
5                   included in budgets for the first six  
6                   months of 1993.

7                   Now, if something has a shelf life I  
8                   understand that to mean it is put on the shelf for some  
9                   period of time and then things really start to  
10                  commence. Is my understanding correct?

11                  Otherwise, you can start on the project  
12                  now and complete it in 2008 so that -- you know, a  
13                  little bit by little bit. But that is not what this  
14                  document is telling us is going to occur?

15                  A. I think we have got some ideas very  
16                  much confused here.

17                  The shelf life is something which is part  
18                  of, I understand, a proposed term and condition of an  
19                  environmental assessment for the Little Jackfish  
20                  project.

21                  My understanding of a shelf life is not  
22                  that it requires you to wait 10 years before you do any  
23                  work; it is more that it permits you to wait up to 10  
24                  years before you start to exercise that approval, so I  
25                  don't see that that requires you to put off the



1 expenditures for 10 years.

2 The question as to when is the right time  
3 to make the commitment for the construction of the  
4 project, at which point the acquisition phase starts  
5 and the major orders are let and the construction  
6 starts and the major spending starts, that relates to  
7 the in-service date and the required construction time.

8 Q. Well, assuming that is postponed as  
9 long as possible, in order to meet the in-service dates  
10 for Little Jackfish shown on that page, schedule 1 to  
11 attachment H of Exhibit 796, when is the work really  
12 going to have to commence?

13 A. I haven't got the latest schedule for  
14 Little Jackfish, but to give you a rough indication if  
15 you go to Exhibit 3, page 12-13, it has schedules for  
16 each hydraulic project, and the solid blue line  
17 represents the acquisition phase.

18 So for an in-service date on Little  
19 Jackfish of around 1996, which I believe would be the  
20 first unit, then the construction would have to start  
21 around 1992. So that gives you about a four-year  
22 period. Different plans may have that extended by a  
23 year or so, but that is of the order of the length of  
24 time of the acquisition phase.

25 Q. So these units can be commenced in

1 that sense in or about the years 2004 to 2005, or, in  
2 the case of Patten Post on the next page of schedule 1  
3 to attachment H to Exhibit 796, we could look at the  
4 same figure for that on the same page of the DSP?

5 A. Sorry, which was the other project  
6 you were referring to?

7 Q. Patten Post on the next page of  
8 schedule 1 to attachment H to Exhibit 796. We could do  
9 a similar comparison?

10 A. We could do a similar comparison,  
11 yes.

12 Q. So looking at Little Jackfish if we  
13 take a four-year period then we are looking at 2004 to  
14 2005 when the project will really have to commence?

15 A. It may be a little earlier than that  
16 because I believe that at the time Exhibit 3 was  
17 prepared that was quite a compressed schedule. But it  
18 is of that order.

19 Q. And the period for Patten Post  
20 acquisition on page 12-13 of Exhibit 3 is from 2002  
21 to -- looks like 2002 to 2009, about seven years?

22 A. That is what is shown here. There  
23 was a more up-to-date figure given in the evidence of  
24 Panel 6, I believe. I don't have that exhibit with me.  
25 That is why I have gone this far back.

1 Q. I take it that some definition work  
2 will also have to be done if the thing is entirely put  
3 on the shelf now and these projects are started at that  
4 time, the acquisition phase is started at that time?

5 A. Well, the definition phase has to  
6 precede the acquisition phase. That is the order in  
7 which things are done.

8 Q. Yes. I got that. But not all the  
9 definition work has been done for either of those  
10 projects and a considerable amount would have to be  
11 done before those projects could enter their  
12 acquisition phase if nothing more is done than has been  
13 done now?

14 A. I'm not familiar with the proportion  
15 of the definition phase work that has already been done  
16 and remains to be done.

17 Q. Would it be fair to say that for a  
18 nuclear unit considerably longer periods of definition  
19 and acquisition phases are required than is shown for  
20 these hydraulic projects for major base load supply?

21 A. Yes. I believe that was given in  
22 Exhibit 3, too.

23 Q. Yes. So that if major base load  
24 supply is to be brought on by 2009 you have to start  
25 the acquisition phase and indeed the definition phase

1 before you start the respective phases for the  
2 hydraulic projects?

3 THE CHAIRMAN: If you want them  
4 in-service on the same date?

5 MR. HEINTZMAN: Q. If you want them  
6 in-service at the same date, yes.

7 MR. SNELSON: A. If you are working to  
8 the tightest schedule, yes.

9 Q. Yes. So what we have here is in  
10 effect Hydro saying to this Board that it wants need  
11 and rationale for hydraulic projects which won't be  
12 commenced so as far their acquisition phases until some  
13 time around 2003?

14 [11:49 a.m.]

15 MR. B. CAMPBELL: Well, Mr. Chairman,  
16 that is factually - and I wish my friend would at least  
17 get it modestly right - that is factually incorrect.  
18 He is picking, he is generalizing from the farthest out  
19 projects, and that is not correct.

20 There are earlier projects that are  
21 contemplated with earlier in-service dates. If he is  
22 going to deal with the whole thing, will he please deal  
23 with, or refer to the specific projects.

24 But if he puts a question on the  
25 hydraulic projects generally, the factual statement

1 that he puts forward in his question is obviously  
2 incorrect, and I object to it.

3 MR. HEINTZMAN: Well, I don't think the  
4 witnesses are having any problem in understanding that  
5 I am dealing with Little Jackfish and Patten Post.

6 Q. Can we understand that, Mr. Snelson  
7 and Mr. Dalziel, and the panel? Those are the only two  
8 that I have mentioned and I haven't mentioned any other  
9 hydraulic projects; is that clear?

10 MR. SNELSON: A. Well, it is now, Yes.

11 Q. And it is clear that Ontario Hydro is  
12 asking this Board to give need and rationale approval  
13 which would cover those projects which will not enter  
14 their acquisition phases --

15 THE CHAIRMAN: Now, we went through this  
16 in great detail this morning with Ms. Marlatt. Maybe I  
17 am missing something here, but all that they are asking  
18 for at this hearing is for approval for a range of  
19 hydraulic projects. That is what they are asking for.

20 There is no specific hydraulic project  
21 that is necessarily included in that range.

22 MR. HEINTZMAN: I didn't suggest that  
23 there was, Mr. Chairman. I am suggesting this the need  
24 and rationale approval would cover those projects if  
25 they were to proceed.



1 THE CHAIRMAN: Yes.

2 MR. HEINTZMAN: Yes.

3 THE CHAIRMAN: But I think that is right.

4 MR. HEINTZMAN: Is that right, mister --

5 THE CHAIRMAN: I don't know, I think I  
6 must be really missing something, because to me it  
7 seems so patently simple that there must be something  
8 that I am missing.

9 MR. HEINTZMAN: Q. Is it that patently  
10 simple, Mr. Snelson?

11 MR. SNELSON: A. Perhaps you could say  
12 it again, I missed it. [Laughter].

13 Q. Ontario Hydro is asking for need and  
14 rationale approval from this Board which would be  
15 sufficient to cover those projects which are not going  
16 to enter their acquisition stage till about the year  
17 2003.

18 A. We're seeking rationale and approval  
19 rationale and need for a range of hydraulic capacity of  
20 1,400 to 1,800 megawatts without reference to specific  
21 projects.

22 Q. But are intended to cover those  
23 projects, if they proceed in that fashion?

24 A. It would cover those projects, I  
25 understand, yes.

1 Q. Yes. And yet Ontario Hydro is not  
2 asking this Board for need and rationale approval for  
3 major base load supply which would have to enter its  
4 acquisition phase before those projects and is intended  
5 to come on-stream at about the same time, 2009, 2010,  
6 as those projects?

7 A. That is correct in the median load  
8 growth.

9 Q. Yes. Those major projects will have  
10 longer lead times in terms of acquisition definition  
11 and require major analysis and environmental  
12 consideration before they proceed, whether they be  
13 nuclear or fossil?

14 A. Yes. Most options require major  
15 environmental analysis before they proceed.

16 Q. And I suggest to you, sir, that in  
17 proceeding in that fashion and asking for approval for  
18 something you can start later, is illogical from a  
19 planning standpoint.

20 A. No--

21 Q. And it --

22 A. --I don't believe so.

23 Q. You don't agree with that?

24 A. No.

25 Q. Well, from a logic standpoint, if you

1 are planning something, you have got to start earlier,  
2 other things being equal, that is illogical, I suggest  
3 to you, or it is logical to ask for approval for  
4 something that requires you longer to bill and you have  
5 to start earlier on than for something you require  
6 later and can start later on.

7 A. Well, your last question threw in the  
8 magical "all other things being equal" and lots of  
9 things are true, other things being equal, but other  
10 things are rarely equal.

11 Q. So other things being equal, that is  
12 illogical from a planning standpoint?

13 A. if the only matters that were  
14 different were ones of length of time and matters you  
15 have mentioned, then you would want to start approvals  
16 on the longest lead time processes earlier than the  
17 shorter lead time.

18 Q. And I suggest to you, also, it is  
19 arbitrary in the sense that it is driven by Ontario  
20 Hydro's decision not to ask this Board for approval for  
21 major base load supply. That is the rationale behind  
22 the date of major new base load supply.

23 MR. B. CAMPBELL: Well, just a minute,  
24 Mr. Chairman. That is the very proposition that we  
25 disputed and my friend has referred to the transcript

1 references, and I thought there was going to be -- we  
2 were going to be given an opportunity to look at what  
3 my friend was relying on in making that assertion.

4 MR. HEINTZMAN: Well, I thought that I  
5 had got sufficiently far with Mr. Dalziel that that  
6 answer is patent, but I will leave it and proceed to  
7 the third proposition; and that is, I suggest to you  
8 that from a planning standpoint it is also riskier to  
9 put off obtaining approval for something you have to  
10 start earlier, is more complicated, requires more time  
11 to plan and put into effect, particularly when you are  
12 planning to a lower load forecast and the median of  
13 that lower load forecast.

14 MR. SNELSON: I think there are balances  
15 of risks in both directions.

16 MR. HEINTZMAN: Q. Well, the ones I have  
17 put to you, I suggest, all drive the element of risk.  
18 You are not asking for the longest term in terms of  
19 planning in building options, you are not asking for  
20 approval of that; and you are doing that in an  
21 environment where you are, A, projecting a lower load  
22 forecast, and, B, planning to the median of that lower  
23 load forecast.

24 Now, all of those factors, other things  
25 being equal, you are courting greater risk.

1 MR. SNELSON: A. Well, if you start  
2 major expenditures on projects that are a long time out  
3 in the future early, then there are risks inherent in  
4 that as well. And that it is the balance of risks that  
5 I was referring to.

6 Q. Well, we went through that on Panel  
7 10.

8 But taking those three factors I suggest  
9 to you, it is evident, is it not, from a planning  
10 standpoint, that you are courting greater risk?

11 A. Greater risk of what.

12 Q. Greater risk that the need for supply  
13 will be greater, and, therefore, you won't have the  
14 major base load you needed; you will spend more; and  
15 all of the things that you and I discussed and we all  
16 discussed in Panel 10, all of those risks, you will  
17 have to build more in shorter lead times at greater  
18 cost, et cetera.

19 I don't think we need to go through that  
20 again.

21 A. Well, I think that we have discussed  
22 that in Panel 10. I believe that the whole philosophy  
23 of changing to planning around the median rather than  
24 planning to the upper is crucial here, and it refers to  
25 the balance of risks between spending money developing



1 long lead time options that may not be required or may  
2 not be the best choices compared to the greater degree  
3 of assurance that we have that some shorter lead  
4 options, such as combustion turbines and non-utility  
5 generation, will be available to meet the need.

6 So they are a balance of risks. The  
7 cutting back on the long lead time expensive options is  
8 itself minimizing some kinds of risk.

9 Q. You are not able to answer me this  
10 proposition, that if you have a larger project which  
11 you require longer time to put into effect - take that  
12 as the first proposition. The second is that you are  
13 planning to a lower load growth. And the third  
14 proposition is that you are planning to the median of  
15 that lower load growth; you are not able to give me a  
16 "yes" answer that you are courting greater risk having  
17 regard to those three factors alone?

18 A. With regard to planning around the  
19 median as regard to planning to the upper, then if  
20 nothing else had changed, that would account for  
21 greater risk. But there are other things that have  
22 changed, and we believe that the risks are manageable.

23 Q. So with regard to those three  
24 factors, you are agreeing with me that there is greater  
25 risk?

1 A. I have addressed the question of --

2 Q. Can you answer that "yes" or "no",  
3 sir?

4 MR. B. CAMPBELL: Well, I am sorry, Mr.  
5 Chairman, but the witness has given, and I believe, is  
6 giving the best answers he can.

7 My friend, for instance, is asking the  
8 median load forecast question which has an equal  
9 distribution of risk. Now, is he ignoring that or does  
10 he dispute that? I mean, I think the question has been  
11 fairly answered in my submission.

12 MR. HEINTZMAN: Can I have an answer to  
13 the question, Mr. Chairman?

14 THE CHAIRMAN: Yes.

15 MR. HEINTZMAN: Q. Would you agree with  
16 me with respect to those three factors, sir, that other  
17 things being equal, you are courting greater risk?

18 MR. SNELSON: A. I want to deal with  
19 them one at a time, because the answers have different  
20 inflections with them.

21 I have told you about the planning to the  
22 median versus planning -- planning around the median as  
23 opposed to planning to the upper.

24 The middle one of your factors was  
25 something to do with a lower median load forecast?

1 Q. You are planning a lower forecast  
2 than you were in the DSP.

3 A. But that is now the prediction of the  
4 median that has got a 50 per cent chance of being  
5 exceeded and a 50 per cent chance of not being reached,  
6 and that is the same conceptually as the median was at  
7 the time of the DSP itself.

8 So there is no change in philosophy with  
9 respect to risk in that respect.

10 Q. No, but if you move your forecast  
11 band down and you don't have a plan as you did before  
12 to meet greater need, the combined factor is greater  
13 risk, is it not?

14 A. Well, due to the change in the  
15 median -- the number of the median load forecast and  
16 whether it's the lower number or not, then that doesn't  
17 conceptually affect the risk we are taking. It affects  
18 our estimate of what is the median load growth. I  
19 think it's that simple.

20 Q. Well, I am not going to try again,  
21 Mr. Snelson, I think I have tried enough on that one.

22 Going back to the attachment H to Exhibit  
23 796, and I don't again want to regurgitate what other  
24 people have said on this issue, but I take it that the  
25 one thing I can understand from the bottom of schedule

1 1, page 1 of schedule 1 to attachment H is that - and  
2 perhaps the Chairman said it this morning - that  
3 Ontario Hydro was no longer working to the principle  
4 that an approval by this Board would have some  
5 reference to a five-year planning period. If it ever  
6 was, it is no longer working towards that principle.

7 A. You're referring to the bottom  
8 paragraph of schedule 1 of attachment H?

9 Q. Yes. The idea of a 10-year shelf  
10 life.

11 A. Well, the 10-year shelf life is  
12 something which is quite separate. It's something to  
13 do with the Little Jackfish project-specific  
14 environmental approval and some proposed conditions to  
15 that approval. It is not a factor in our general  
16 demand/supply planning methodology.

17 Q. That is right. And what I am saying  
18 to you, and I would like an answer to this, is that  
19 Ontario Hydro is no longer working to the principle,  
20 and if I can emphasize the word "principle", that  
21 approvals by this Board have some reference to a 5-year  
22 period.

23 That is evident from that paragraph, at  
24 the bottom of schedule 1.

25 THE CHAIRMAN: Well, why don't we leave

1 the paragraph out of the question, because I think the  
2 paragraph is a little bit misleading, or troublesome, I  
3 put it that way. It deals the site-specific  
4 application with respect to Little Jackfish and the  
5 conditions that may be opposed in that group. But I  
6 think you can ask the question without reference to  
7 that.

8 MR. B. CAMPBELL: Mr. Chairman, I would  
9 appreciate it if, in asking the question, my friend  
10 would make it clear as to whether he is talking about  
11 how Ontario Hydro determined what it was going to ask  
12 for approval for - which is one question; versus a  
13 question of having obtained that approval--

14 THE CHAIRMAN: No, no. I think --

15 MR. B. CAMPBELL: --how long it is in  
16 effect for, because I think my friend has mixed that up  
17 entirely.

18 [12:03 p.m.]

19 THE CHAIRMAN: He is asking whether the  
20 five-year action plan still has any relevance to  
21 Ontario Hydro, and I know it has been asked before  
22 already this morning, but let's have Mr. Snelson one  
23 more time on that one.

24 MR. HEINTZMAN: Q. Have you got my  
25 question, sir? Ontario Hydro is not operating on the



1 principle that approvals by this Board will be operable  
2 for something referable to five years.

3 THE CHAIRMAN: That is a different  
4 question than I heard the last time.

5 MR. HEINTZMAN: Then let's have my  
6 question read back.

7 THE CHAIRMAN: The problem is we have  
8 lost reporter who took the question.

9 AS I remember it, if my memory is any  
10 good, is whether or not the five-year action plan is  
11 still a planning principle of Ontario Hydro. I may not  
12 have got it quite right, but that was the general gist  
13 of it.

14 MR. HEINTZMAN: Q. Let's try that one.  
15 A planning principle.

16 MR. SNELSON: A. The five-year action  
17 plan is and has always been only with reference to the  
18 selection of which approvals should be requested from  
19 this hearing.

20 Q. Let me just start, let me just break  
21 that down then. Then the five-year action plan has  
22 never been a planning principle; right? Is that what  
23 you are saying?

24 A. Well, planning principle is kind of a  
25 rather general term. I am telling you specifically

1 what is referred to. If it's a planning principle,  
2 it's a planning principle.

3 Q. In the sense that this Board is being  
4 asked for something. But other than that, the five  
5 years has not been a planning principle, except as you  
6 have told us.

7 MR. B. CAMPBELL: Mr. Chairman, he said  
8 exactly what it was and for nothing else. Now I don't  
9 know how he can be more definitive than that. He has  
10 answered the question.

11 MR. HEINTZMAN: Well, Mr. Chairman, I  
12 object to Mr. Campbell being on his feet at least 10  
13 sometimes so far in my cross-examination of under about  
14 40 or 45 minutes. These witnesses are very competent  
15 witnesses and they can ask answer the questions, and I  
16 don't think they need interruptions by their counsel.

17 MR. B. CAMPBELL: Mr. Chairman, I am  
18 entitled and will make objections to questions as they  
19 seem required in the best of my judgment. If my friend  
20 has an argument as opposed to some editorial comment to  
21 make about that, he is free to do so, and I would  
22 welcome it.

23 But this panel is here to indicate the  
24 changes that have been made since Panel 10, and with  
25 great respect, I think much of what we have heard today

1 has little or nothing to do with that, but I certainly  
2 stand my right to make appropriate objectives as I see  
3 fit. If I am out of order, I am absolutely sure you  
4 will have no hesitation to tell me to sit down as you  
5 have on several - perhaps more than I like - occasions.

6 MR. HEINTZMAN: Well, I am asking that  
7 this be one of those occasions.

8 THE CHAIRMAN: I am asking, Mr.  
9 Heintzman, if you please proceed with your examination.

10 MR. HEINTZMAN: Q. Now, I want to turn  
11 to a related issue and that's what will happen if in  
12 fact Ontario Hydro ends up at something at or near the  
13 upper load forecast, and we have prepared some  
14 documents that will assist us in this regard.

15 First of all, Mr. Chairman, I have handed  
16 out a document which is a rework of figure 8-1, need  
17 date for new major supply, which is a copy with some  
18 changes to it and some supplementary pages, being a  
19 photocopy of that figure from Exhibit 796.

20 THE REGISTRAR: That would be Exhibit No.  
21 1043.

22 ---EXHIBIT NO. 1043: Rework of figure 8-1.

23 MR. HEINTZMAN: Q. Now, Mr. Burke or Mr.  
24 Snelson, I guess, could help me on the first page this  
25 document. What we have done here is trace from pages

1 129, I guess it would be 130 for the primary energy  
2 forecast in attachment C, Exhibit 796, what the  
3 situation will be if the upper primary peak load is  
4 achieved. And subject to your checking those numbers,  
5 you will see that if you look at page 130, that at the  
6 upper forecast we would be at 35.9 gigawatts and  
7 therefore you see the line going off the top of the map  
8 at the top in 2010. Subject to checking would you  
9 agree with me that what is represented on figure 8-1 is  
10 a fair representation of what will occur under the  
11 upper primary peak load?

12 MR. DALZIEL: A. I would accept your  
13 upper primary peak load line on that figure as being  
14 reasonable.

15 Q. And the net result is that if that  
16 occurs, that there indeed is no surplus, in fact, there  
17 will be a major deficiency in the system if the system  
18 tracks the upper primary load growth?

19 A. I see the system being roughly in  
20 balance with the upper load forecast to about the year  
21 1997.

22 Q. Yes. And then there being major  
23 deficiencies in the system until -- well, thereafter?

24 A. Beyond that date this indicates there  
25 is a requirement for new supply facilities.

1 Q. Yes. And if you would look with me  
2 at Exhibit 937, page 2.

3 A. Could you repeat the page number?

4 Q. Page 2 of Exhibit 937. Again, if we  
5 were to trace the upper basic load forecast on to that  
6 chart, in addition to the median line, which is shown  
7 on that chart now, I suggest to you that it would track  
8 at or above the load-meeting capability of the existing  
9 system. For instance, just to give you the number, in  
10 1994 the number on page 129 of attachment C is 26. So  
11 26 gigawatts, or 26,000 megawatts, so we are up near  
12 the top of the so-called load-meeting capability of the  
13 existing system.

14 A. Yes.

15 Q. So that to the extent that the system  
16 tracks the upper basic, then the load-meeting  
17 capability of the existing system and any new additions  
18 will be insufficient and continually more so  
19 insufficient to meet that basic load.

20 A. Beyond 1994?

21 Q. Yes.

22 A. If primary demand is the same as the  
23 upper basic?

24 Q. Yes.

25 A. Then you would need new demand/supply



1 options after 1994?

2 Q. Yes.

3 A. Yes.

4 Q. Right. Now, the difference between  
5 primary and basic is basically demand management?

6 A. Yes, with load displacement  
7 non-utility generation.

8 Q. All right. But to the extent that  
9 your program of demand management involves risks and  
10 would you agree with me, Mr. Dalziel, or whomever, that  
11 the least we can say about what has happened in  
12 December 1992 is that you are pretty uncertain as to  
13 what is going to happen to your demand management, you  
14 have made a major reversal on your projections for  
15 demand management in the last year?

16 MR. SHALABY: A. I guess this goes to  
17 whomever, so I will take that.

18 I don't think what you are characterizing  
19 is the spirit of the evidence that we have given on the  
20 demand management review that we're giving. It's not a  
21 major reversal. It's a scaling down of some programs,  
22 cutting of some budgets, but it's not a major reversal.

23 Q. You cut it in half. You cut demand  
24 management in a half.

25 A. No, we didn't say that.

1 Q. Am I not reading these right?

2 Could you turn with me to attachment C in  
3 Exhibit 796, page 36. The bottom line shows in 2015,  
4 for instance, that you were, as late as the last  
5 update, planning on 9,540 cumulative net impact of  
6 demand side management and load displacement and now  
7 you are planning on 4,311, it's less than half.

8 MR. BURKE: A. I hesitate to interpret  
9 the question you asked Mr. Shalaby, but I thought you  
10 were talking about 1994, and in 1994 you can see there  
11 is almost no difference in this forecast.

12 Q. I'm sorry. Looking at it as a  
13 long-term prospect, you are counting in 2015 on less  
14 than half of demand side management and load  
15 displacement as you were under the Update less than a  
16 year ago?

17 A. I think we have been quite clear  
18 about the transformation in the basic load forecast and  
19 the transition of programs into market driven  
20 efficiency and fuel switching improvements, but I  
21 thought you were talking a much earlier period.

22 I think this should be clear, and was  
23 clear in our evidence, that the '93 and '94 forecasts  
24 are not changed very much at all for demand management.

25 The long-term is, but the basic load

1 forecast is down as well and the net effect is that  
2 there is very little difference between the primary  
3 forecast for the DSP Update and the current projection.

4 Q. I am talking about the uncertainty of  
5 your demand management program. I would have thought  
6 that something that is cut in half over your planning  
7 period is -- I would have use used word "dramatic"  
8 change in your demand management project. You can't  
9 agree with that?

10 A. I think what has happened is, if  
11 anything, the confidence in our load forecast must have  
12 risen as a result of this, because the amount of demand  
13 management subject to uncertainty is now less than half  
14 of what it was before, as you point out, and the basic  
15 load forecast encompasses through market-driven factors  
16 a lot of the efficiency improvement.

17 I think if anything, if you are  
18 identifying demand management programs with a risk  
19 element, it's much lower than it used to be.

20 Q. Can we not, sir, see from that table  
21 1.4.1 that there is a great deal of risk in trying to  
22 project future demand management; is that not evident  
23 from that chart?

24 [12:19 p.m.]

25 A. Something I have tried to emphasize,

1 right through the evidence before this Board, is that  
2 the basic and the demand management measures are  
3 linked; they don't move independently.

4 The uncertainty band methodology which we  
5 adopted for the primary reflects that as well. You  
6 cannot look at one without the other, and what really  
7 counts is uncertainty in the primary load, recognizing  
8 the uncertainty in the basic and demand management  
9 combined because - and this forecast is very clear  
10 evidence of this - if you make changes in the basic  
11 they show up as changes in demand management potential,  
12 and they are linked.

13 So that my position is that the change in  
14 the demand management, because it comes about at the  
15 same time as there are changes in the basic load  
16 forecast, does not indicate a radical change. It is  
17 not relevant whether the demand management numbers are  
18 large or small in the long term; what really counts  
19 here is the primary load forecast changing  
20 significantly.

21 Q. Well, I'm afraid I can only discuss  
22 one subject with you at a time, and I want to put the  
23 basic load to the side, and I want to ask you questions  
24 about the demand management subject alone.

25 A. Well..



1 Q. In looking at demand management alone  
2 can you not agree with me that the one thing we can see  
3 is that the amount of demand management you can expect  
4 is a very uncertain thing?

5 A. I think we have described all of the  
6 things that go into estimating demand management  
7 potential, and I don't accept your premise because I  
8 don't think you can look at demand management alone.  
9 So I guess we -- I can't really agree.

10 Q. Did you have any input, Mr. Burke,  
11 into the numbers we have in here for the basic and for  
12 the primary load forecast in attachment C?

13 A. Yes. I'm the manager of the  
14 department that produced that document, yes.

15 Q. Can you tell me, sir, whether you  
16 first arrived at your conclusions about the changes in  
17 demand management or you first arrived at your  
18 conclusion with respect to changes in basic load  
19 forecast? Which did you do first?

20 A. I was quite clear in my direct  
21 evidence about this, and have been right the way  
22 through the hearing, it is the same stuff as in Panel 1  
23 and in Panel 4. We looked at the basic load forecast  
24 first, we use the potential for demand management that  
25 comes out of the basic load forecast to determine



1 potential -- yes, we use the potential loads that are  
2 included in the basic load forecasts to derive the  
3 potential for demand management.

4 Q. Well, in any event, the difference  
5 between -- it will be up to this Board to conclude the  
6 certainty or uncertainty of demand management, but to  
7 the extent that demand management is uncertain that is  
8 going to affect the relationship between the basic and  
9 the primary energy or power requirements?

10 A. Yes.

11 Q. Yes?

12 A. Given what I have said already, that  
13 the basic is highly correlated with the demand  
14 management numbers.

15 Q. Yes. But if you are uncertain and  
16 you feel that you may not achieve the amount of demand  
17 management, then if I can put it in my layman's term,  
18 you are going to plan more to the basic than you are to  
19 the primary, because you are not very certain that you  
20 are going to get the amount of demand management that  
21 you anticipated?

22 A. The forecast for demand management is  
23 a median forecast just as the other forecasts are  
24 median forecasts. They reflect judgments perhaps, but  
25 the judgments are that what is forecasted there is the

1 median forecast, same as for the basic.

2 Q. And to the extent, if you look back  
3 on page 2, sir, of Exhibit 937, you don't have an upper  
4 basic line traced on that plan, nor do we have the  
5 primary line, median or upper, traced on that plan.  
6 But to the extent that your demand management program  
7 is uncertain, the more you are going to track either  
8 the upper primary or a higher basic number if you don't  
9 achieve the amount of demand management you think you  
10 are going to achieve; isn't that correct?

11 A. Could you repeat that question? It  
12 wasn't clear to me.

13 Q. To the extent that you don't achieve  
14 the demand management you have projected you are going  
15 to track a higher number at the primary level and  
16 therefore closer to the basic number?

17 A. That's correct, yes.

18 Q. Yes. Now, if I could turn you, then,  
19 to the second page of Exhibit 1043 and, to the third  
20 page, and what we have charted here is Ontario Hydro's  
21 experience in projecting load growth.

22 The numbers for the actual load growth  
23 are shown in the second column, the year date being in  
24 first column, and then for each year the forecast year  
25 is shown, F75 being the forecast made in 1975, and

1 running out to the right to the forecast in 1989.

2 So if you take, for instance, 1988 --  
3 sorry, the forecast year 1980 and you drop down to what  
4 was the forecast in 1980 for the load in 1987, the  
5 number is 22242, which you can see by going across the  
6 page was greater than it actually was in 1987. It  
7 actually was 20609. Do you see that?

8 A. Yes.

9 Q. Now, if you then turn to --

10 MR. B. CAMPBELL: Mr. Chairman, at the  
11 risk of offending my friend this is, in my submission,  
12 the perfect example of a cross-examination which is  
13 exactly repeating entirely, material that either was  
14 available or should have been covered if it was of  
15 interest to my friend at the time of the previous  
16 panels.

17 There is not a number on either of these  
18 two pages which was not fully available to my friends  
19 at the time of their prior appearances.

20 If my friend has a question about the  
21 changes that have been introduced over the previous  
22 forecast from this forecast, then in my submission he  
23 should ask those questions.

24 My understanding is that it is not open  
25 to cross-examiners in the course of this panel's

1 appearance to simply repeat matters that either were,  
2 or could have been covered, or on information that is  
3 purely information that is not put forward as a change  
4 to the existing situation.

5 MR. HEINTZMAN: Mr. Chairman, the risks  
6 that Ontario Hydro is running by virtue of the  
7 December, 1992 forecast and plan - in my submission -  
8 directly relate to what this exhibit is showing, that  
9 they are courting a situation by virtue of being in the  
10 situation of underforecasting, which I submit this  
11 document demonstrates.

12 THE CHAIRMAN: You mean, they have  
13 underforecast in the past; therefore, they have  
14 underforecast now? Is that your proposition?

15 MR. HEINTZMAN: No, that they  
16 consistently overforecast during good times and  
17 underforecast during bad times, and that we are in bad  
18 times and that they are underforecasting and they are  
19 not going to be ready for good times. And that is the  
20 reason why this document is important in relation to  
21 the December, 1992 plan.

22 MR. B. CAMPBELL: There is nothing  
23 different here, Mr. Chairman, than the figures that  
24 were available to my friend on Panel 10 or the  
25 philosophy that was taken in Panel 10. From a planning

1 point of view there is just no change.

2 THE CHAIRMAN: No, but the proposition  
3 is -- what we are discussing is the 1992 load forecast,  
4 and it is Mr. Heintzman's contention that there is this  
5 history of forecasting, and I think he can ask Mr.  
6 Burke in that context. But he can do that after lunch  
7 because we are now going to stop until a quarter to  
8 2:00.

9 THE REGISTRAR: Please come to order.  
10 This hearing is adjourned until 1:45 p.m.  
11 ---Luncheon recess at 12:29 p.m.  
12 ---On resuming at 1:47 p.m.

13 THE REGISTRAR: Please come to order.  
14 This hearing is again in session. Be seated, please.

15 THE CHAIRMAN: Mr. Heintzman?

16 MR. HEINTZMAN: Thank you, Mr. Chairman.

17 Q. Mr. Dalziel, I don't know if you had  
18 a chance to look at pages 27381 to 27383 and pages  
19 27389; if you did, did I correctly put the propositions  
20 to you this morning as to the assumption and  
21 construction of the cases that we discussed in Panel  
22 10?

23 MR. DALZIEL: A. I have had a chance to  
24 look at those pages, and I don't think the proposition  
25 was put forward in the right context.



1 Q. Well, do you have those pages?

2 A. Which page do you want me to go to?

3 Q. I will read questions to you from  
4 pages 27381 through 27383 and 27388 and 27389, from  
5 Volumes 154 and 155.

6 Starting at page 27381, which is in  
7 Volume 154, at line 20, I picked up on something that  
8 you have said previously.

9 "You said this plan assumes a starting  
10 date in 1999?

11 "ANSWER: For the base load major supply  
12 options."

13 And then I asked you some questions and  
14 at line 17 on page 27382 -- well, starting at line 14,  
15 I asked you the question:

16 "Now, I'm suggesting to you that it  
17 would be perfectly feasible to have a  
18 nuclear generation station available for  
19 2006 and 2007.

20 "ANSWER: Not the way we have put this  
21 case indication together.

22 "QUESTION: And that's because you are  
23 in a state of suspended animation on  
24 nuclear until 1999?

25 "ANSWER: And on fossil. For both of

1                   them."

2                   And then on page 27383, at line 4:

3                   "So nothing happens between now and  
4                   1999 in terms of base load; is that it,  
5                   we just sort of --

6                   "ANSWER: In terms of base load, the  
7                   way these plans were put together, that's  
8                   correct.

9                   "QUESTION: So we just wait and don't  
10                  do anything on the base load until 1999;  
11                  is that the way these plans were all  
12                  constructed?

13                  "ANSWER: That's the way these were  
14                  constructed."

15                  And then on the next day at the  
16                  commencement of the examination in Volume 155 at line  
17                  20 of page 27388, I picked up on that point by saying  
18                  to you:

19                  "Mr. Dalziel, at the conclusion of  
20                  yesterday's hearing you advised us that  
21                  all of the plans that underlie the Update  
22                  assume that there is no planning for base  
23                  load either nuclear, fossil or whatever,  
24                  until 1999; is that correct?

25                  "ANSWER: That's correct.

1 "QUESTION: Can you tell me why 1999,  
2 what's the special significance of 1999?

3 "ANSWER: In putting these two cases  
4 together we were looking at reflecting  
5 the fact that we are not seeking  
6 approvals in this hearing at this time  
7 for those base load supply options.

8 "QUESTION. That's the reason?

9 "ANSWER: That's the reason."  
10 So that's what you told me at that time?  
11 A. Yes.

12 Q. And that remains the same today?

13 A. Yes, it does.

14 Now, the two cases that are being  
15 referred to here at the top of 27389, those were the  
16 cases for upper load forecast at the time of Panel 10.

17 Q. Upper load forecast?

18 A. Yes. Those are the cases that are  
19 being referred to. And I think what we were missing,  
20 the context that we were missing before lunch is that  
21 in planning around the median, we arrive at the  
22 conclusion that we do not need to seek approval from  
23 major supply facilities at this time.

24 And then what we were wanting to reflect  
25 then when we looked at the upper load forecast is the

1 impact of planning around the median.

2 Q. Well, I suggest to you --

3 A. So having accepted planning around  
4 the median, and that major supply facilities could be  
5 in-service around the year 2010, that was consistently  
6 reflected in those cases for upper load forecast.

7 Now, what we are not accepting is that  
8 it's a fundamental premise that 1999 was the start date  
9 for any consideration for major supply facilities.

10 It was having accepted planning around  
11 the median and the consequences that flow from that  
12 when we turn to the upper load forecast. That's why we  
13 still have the base load facilities coming into  
14 service -- well, it depends on which facility you are  
15 looking at. It was 2007, I think, for the IGCC and  
16 2009 for the CANDU.

17 Q. Well, I suggest to you sir, and we  
18 have got this on the record, I'm quite content to stay  
19 with the record that there was exactly the opposite  
20 that we established between -- that this discussion had  
21 nothing to do with the upper load forecast at all.

22 What it had to do was with the fact that  
23 there might be a requirement for major basic -- for  
24 base load supply, and I was then asking you why you  
25 weren't providing for a base load supply in the early

1 2000 range, and you said because the plans were  
2 constructed on the basis that Ontario Hydro's board had  
3 decided that it would not ask for a major new supply,  
4 that therefore the plan reflects the major new supply  
5 for base load will not start until 1999.

6 That's the result of the thread of the  
7 cross-examination that I conducted in Panel 10.

8 A. Well, the discussion that was taking  
9 place here was in the context of upper load forecast.

10 THE CHAIRMAN: Where? Back in June or  
11 now?

12 MR. DALZIEL: I thought I just heard Mr.  
13 Heintzman saying that the conversation had nothing at  
14 all to do with the upper load forecast.

15 MR. HEINTZMAN: Q. The Chairman is  
16 asking are you talking today or back in June of 1992?

17 MR. DALZIEL: A. Back in June.

18 And I'm referring to page 27389.

19 Q. 389?

20 A. Yes.

21 Q. Yes.

22 A. And my response at the begining of  
23 line 3: "In putting these two cases together...."  
24 What has been referred to there is these two cases were  
25 the upper load forecast with approvals and without



1       approvals as described in Exhibit 646.

2                   Q.   No, no.   We were discussing, these  
3       two cases were the nuclear case and the fossil case,  
4       that's what we were discussing.

5                   THE CHAIRMAN:   Just a moment.

6                   If you look at page 27379, Dr. Connell  
7       points out to me.

8                   MR. HEINTZMAN:   79.

9                   THE CHAIRMAN:   I haven't checked through,  
10      but that is where this conversation seems to begin,  
11      that ends the day.   At line 18 there is a reference to  
12      the El-3, which is Exhibit 646, I guess, and that was  
13      the upper nuclear/upper fossil case.

14                  So, I guess, is that what you are saying?  
15      It was in the context of those cases that you made your  
16      answers?

17                  MR. DALZIEL:   Yes.

18                  MR. HEINTZMAN:   Q.   I see.   Well, then,  
19      certainly you and I at the time were obviously not on  
20      the same wavelength or load growth or whatever.   The  
21      questions, the question at page 27381 --

22                  THE CHAIRMAN:   Well, I wonder if it  
23      wouldn't be easier, rather than to go back, if we  
24      couldn't get Mr. Dalziel's current position on the  
25      issues that you addressed.   It may be a little

1 repititious, but just so it is clear, because, I mean,  
2 I think it is a little confusing as to what was being  
3 talked about and so on.

4 MR. HEINTZMAN: Well, except that the  
5 answers --

6 THE CHAIRMAN: Well...

7 MR. HEINTZMAN: Q. I could refer you to  
8 earlier passes where both you and Mr. Snelson said that  
9 Ontario Hydro had made a fundamental decision not to  
10 ask for -- Ontario Hydro's board of directors had made  
11 a fundamental decision not to ask for major new supply  
12 base load at this hearing; that's correct, is it not?

13 MR. SNELSON: A. We made a decision to  
14 seek approvals based upon the median load forecast  
15 which was the planning around the median, and that that  
16 did not require approvals for major supply in this  
17 process.

18 MR. HEINTZMAN: Mr. Chairman, there are  
19 specific questions where this was dealt with  
20 previously, and I have to go back to that.

21 THE CHAIRMAN: Well, I thought it was--

22 MR. HEINTZMAN: I think they are on the  
23 record --

24 THE CHAIRMAN: --abundantly clear that in  
25 this hearing Ontario Hydro is not at this time asking

1 for any approvals for new major supply.

2 I don't think there is any doubt about  
3 that, is there, Mr. Snelson?

4 MR. SNELSON: There is no doubt about  
5 that.

6 THE CHAIRMAN: Pardon?

7 MR. SNELSON: There is no doubt about  
8 that.

9 THE CHAIRMAN: No doubt about that.

10 MR. HEINTZMAN: Well, I think I am just  
11 going to leave the answers the way they are, because I  
12 think it is entirely clear, and I'm afraid I am going  
13 to get into a debate with the witnesses about something  
14 that's on the record, unless it is helpful to the  
15 Panel.

16 Q. Let me just ask you this question,  
17 Mr. Dalziel, that being the case as Mr. Snelson said,  
18 that Ontario Hydro is not asking for approvals for base  
19 load from this Panel, from this Board.

20 MR. DALZIEL: A. That's correct.

21 Q. And in preparing the two scenarios,  
22 the Update nuclear and the Update fossil contained in  
23 the Update plan, that was a fundamental premise in  
24 constructing the plans that were put before the Board  
25 in the Update?

1 A. No.

2 Q. So even though you were not asking  
3 for a supply, for a major new supply base load, that  
4 that was an assumption that you made in preparing the  
5 Update cases?

6 A. What I understand from your question  
7 is: Was it an assumption as an input to the  
8 development of the plans? And I am saying no to that.

9 It is something that fell out of the  
10 decision to plan around the median and the need date  
11 for new major supply facilities.

12 Q. Well, if you look with me at page  
13 27388 -- and I don't like, Mr. Chairman, to refer the  
14 witnesses, but we specifically there were talking about  
15 either nuclear or fossil until 1999.

16 MR. B. CAMPBELL: Mr. Chairman, aren't we  
17 right back into exactly the same point?

18 THE CHAIRMAN: Let's find where we are  
19 first, and we will see where the point is.

20 Where are we, Mr. Heintzman?

21 MR. HEINTZMAN: 27388.

22 MR. B. CAMPBELL: And Mr. Heintzman's  
23 question, Mr. Chairman, at the bottom there starts: At  
24 the conclusion of yesterday's hearings you advised us  
25 this and this; and Mr. Dalziel went on to answer the

1 questions in the same context, in my submission, as the  
2 previous day, yesterday. And he has advised you  
3 already as to the context and the transcript reference  
4 has been reviewed as to what that context was at the  
5 start of this exchange.

6 I think we are right back where we were a  
7 few minutes ago.

8 THE CHAIRMAN: Well, there seems to be a  
9 mutual lack of understanding. You thought you were,  
10 and you did ask about the Update, and Mr. Dalziel today  
11 says he thought he was talking about the upper cases,  
12 so I think that is--

13 MR. HEINTZMAN: Yes, I understand that.

14 Q. But the answer you gave to me at line  
15 3 of page 27389 say:

16 "In putting these two cases together we  
17 were looking at reflecting the fact that  
18 we are not seeking approvals in this  
19 hearing at this time for those base load  
20 supply options."

21 THE CHAIRMAN: Well, I don't like to  
22 interject, but that makes more sense than the context  
23 of the upper case -- the upper case and the low -- I'm  
24 not giving...

25 My understanding of the Panel 10 evidence



1 is that they did the update nuclear and the update  
2 fossil, and having done that, lo and behold, it turns  
3 out they don't need new major supply as a result of  
4 that, and then they wonder: Is that going to work out?  
5 So they then looked at the upper case and the lower  
6 case just to see how that impinged on.

7 Is that...?

8 MR. DALZIEL: Yes.

9 THE CHAIRMAN: That was the gist of what  
10 the Panel 10 evidence was.

11 MR. HEINTZMAN: I see. Well, I am going  
12 to have to reread the transcript to see if I can get  
13 that gist, because I got a specific gist and I think  
14 that's what the transcript reveals.

15 There is one specific part where the  
16 matter was dealt with that I am going to have to find  
17 on another occasion for the Panel, or for the Board.

18 Q. Now, we were looking at the page from  
19 Exhibit 1043, which had the title: Comparison of  
20 Ontario Hydro's Actual Peak Demands with Forecast; and  
21 a chart which seeks to reflect what is shown on the  
22 comparison page.

23 And am I talking to you, Mr. Burke?  
24 Would that be the best person to talk with?

25 MR. BURKE: A. Well, let's start with

1 me.

2 Q. What the chart seeks to show is that  
3 in the years 1975 through about 1980 Ontario Hydro was  
4 consistently, although to a lesser extent,  
5 overforecasting what actually happened in reality, and  
6 then starting in about 1980, it underforecasted the  
7 load that actually occurred.

8 Is that a fair rendition of what the  
9 chart shows us?

10 A. Well, what the chart shows us is the  
11 data you have selected to show which is a 7-year ahead  
12 forecast performance for the period that you have  
13 chosen to show it, and you have not included the  
14 results for '91 and '92; and you have, for some reason,  
15 chosen the seven-year ahead forecast horizon which I  
16 can only presume is so that you could have a particular  
17 result for 1990, based on a forecast made just after  
18 the recession in 1982.

19 [2:03 p.m.]

20 So I think for what you have selected to  
21 show you have characterized the results correctly, but  
22 I would reserve comment as to whether that is  
23 generalizable or, in fact, a complete picture.

24 Q. Well, it is not an unknown phenomena  
25 that you might underestimate how good things are going

1 to be and overestimate how bad things are going to be  
2 in planning.

3 A. Is that a question?

4 Q. Yes.

5 A. It is the case that in the last  
6 recession the load forecasts were revised down after  
7 1982 and that subsequent to 1982 they were revised back  
8 upwards slowly and that people who watched this whole  
9 process very carefully were quite aware that that was  
10 happening.

11 As I have been involved in the forecast  
12 since 1987 I have resolved to not repeat that error and  
13 have been very conscious of not reducing a load  
14 forecast for cyclical reasons in the long term, and I  
15 believe that is still the case in the load forecast and  
16 that the evidence in attachment C on the trend for the  
17 basic and primary load forecasts from '88 through to  
18 the present, '92, bear me out, that the forecast is  
19 stable, for cyclical factors.

20 In other words, GDP has hardly changed in  
21 this forecast in the long run, and what has caused the  
22 change in the forecast, to the extent that there is  
23 one, is the change in the relative price of electricity  
24 and gas with the price of electricity rising over the  
25 period since '88, as I indicated in my direct evidence,

1 and more recently forecast for natural gas falling in  
2 our forecast.

3 And therein lies a large part of the  
4 difference in any forecasts we have made from a period  
5 that was at the peak of the economic cycle to a period  
6 which is hopefully at the trough of this current cycle,  
7 and so I think we have not done what you are implying  
8 we may have done in the past.

9 Q. Well, the historical evidence would  
10 indicate the proposition I am putting to you; namely,  
11 that in the recession and as the economy comes out of  
12 the recession Ontario Hydro has historically  
13 underestimated the load growth in the future, if we  
14 look at the last recession?

15 A. I think you have got one piece of  
16 evidence for the 1982 recession and you have got it for  
17 a period in time at which electricity prices were flat  
18 and gas prices were rising in Canada still. And now we  
19 are sitting at a different period where electricity  
20 prices have been rising and gas prices have been  
21 falling, and a forecaster who is quite conscious of the  
22 pattern that happened the one time before that your  
23 observation is correct.

24 Q. All right. But the people who are  
25 wrestling with the conditions as they were in the early

1 1980s thought they had it as right as you think you  
2 have got it right, presumably?

3 A. I would argue that the risk now would  
4 be that by holding things up I'm too high, is the way  
5 most people would perceive the error I am making, if I  
6 try to learn from the 1982 experience.

7 Q. But presumably the people in 1981/82  
8 were trying to deal with the factors as they saw them  
9 in the same fashion and as well as you are. Is that  
10 not a reasonable presumption?

11 A. Well, I think it is very difficult  
12 for me to figure out what the people in 1982 were  
13 doing. But my understanding of the forecast that  
14 resulted in the period just after the recession was  
15 that it may have overreacted to the recession and that  
16 I in preparing this forecast have quite carefully tried  
17 not to do that as far as the long-term forecast is  
18 concerned.

19 Q. I see. Well, let's look at another  
20 document that we have prepared, and it is entitled  
21 "Evolution of Hydro's Recommended Long-Term Forecasts".

22 Does the Board have that document?

23 THE CHAIRMAN: Is this a separate  
24 document from the one --

25 THE REGISTRAR: Yes. That will be 1044.



1 THE CHAIRMAN: Thank you.

2 ---EXHIBIT NO. 1044: Document prepared by Atomic  
3 Energy of Canada, entitled  
4 "Evolution of Hydro's Recommended  
Long-Term Forecasts".

5 MR. HEINTZMAN: Q. What this document  
6 seeks to do, Mr. Burke, is to show that Ontario Hydro  
7 has moved to a situation where it is now using as the  
8 recommended long-term forecast the lowest of the two  
9 choices which it has historically always put in its  
10 forecast document; namely, the econometric model known  
11 as EEMO, E-E-M-O, and the other method is the end use  
12 model.

13 Now, first of all, have you had a chance  
14 to look at these numbers and confirm that they are  
15 basically correct?

16 MR. BURKE: A. Well, I must admit, I  
17 haven't checked them all out, but they look roughly  
18 right.

19 Q. So that if we look back to -- let's  
20 take the year 2000. In the '88 forecast the EEMO  
21 number was 187.8 and the end use number was 178.6, the  
22 lower number, and the recommended number was between  
23 the two of them; right?

24 A. That's correct. The rationale for  
25 all these forecasts is contained in each of the

1 forecast documents.

2 Q. Yes. Yes. And the same in 1989, the  
3 recommended number is between the two of them, in 1990  
4 the number is between the two of them. And now in 1992  
5 in the latest load forecast right across the piece from  
6 2000 to 2015 the recommended number is the lower  
7 number, the end use number; right?

8 A. That's correct.

9 Q. So to the extent again that you are  
10 selecting the end use calculation number without  
11 factoring in some allowance for the econometric model  
12 again you are erring on the low side of the equation,  
13 of the range?

14 A. I don't believe I am erring at all.  
15 That is why I made the choice.

16 The thing that has changed between '88  
17 and '92 is our end use models have become very much  
18 better and include a lot of econometric projections  
19 within them to determine key elements of the forecast.

20 They are much more detailed. They can  
21 take into account very many more things than the  
22 econometric model can, and I have rationalized for each  
23 of the forecasts and given testimony. Certainly in  
24 Panel 1 we dealt with the '88 to '90 forecasts and the  
25 choices there.

1                   The choice in '92, as you can see, for  
2     the year 2000 the difference between the models is the  
3     smallest of any of the years in the period, and the  
4     choice there is simply that the end use model is much  
5     better able to take into account the sorts of things to  
6     do with fuel switching than the econometric model.

7                   In fact, I now view the econometric model  
8     as a useful check, but the end use model is improved to  
9     the point where I would have to have very good reasons  
10    not to use it.

11                  Q. Well, can you tell me historically  
12    whether the load growth has actually tracked the end  
13    use model closer than the EEMO model or the reverse?

14                  A. Well, there is evidence given in  
15    interrogatory responses to Panel 1 when we were asked  
16    that, and unfortunately the track record is quite short  
17    because the end use models were used for a very short  
18    period of time. So you are really checking the  
19    short-term load forecasting performance. Actually,  
20    they performed extremely well over the short periods  
21    for which we have data to check the results of the  
22    models.

23                  The EEMO model evolves. It has been  
24    slightly different in most years that it has existed.  
25    Its track record was pretty good too, but we are not in

1 a position to base the choice of the model for  
2 long-term forecasting on the basis of a long-term  
3 forecasting track record. We have to base it on the  
4 extent of the analysis that is involved in these models  
5 and the judgment as to which model best reflects the  
6 conditions that will pertain in future.

7 And I have testified that the end use  
8 model does, and the only area where we applied judgment  
9 in 1990, we were concerned about the commercial sector  
10 forecast, and there was such a discrepancy between the  
11 commercial forecast in the econometric model and the  
12 end use model.

13 I think the analysis subsequently, the  
14 data we have gotten about what has gone on in the  
15 commercial sector over the late '80s has confirmed that  
16 the end use model is more on track than the econometric  
17 model; that is, the trends of the late '80s in the  
18 commercial sector are not good indicators of what is  
19 going on now and is likely to continue to go on in the  
20 commercial sector. And therefore, it is right to  
21 discount that forecast.

22 In 1990 we use the end use forecast for  
23 residential and industrial in their entirety, and  
24 effectively in this forecast we are using the  
25 commercial end use as well, given further analysis.



1                   And by 'analysis' I don't just mean how  
2                   we project things but knowledge of the marketplace,  
3                   because the data that exists for this sort of thing  
4                   comes with a long lag. You don't find out exactly how  
5                   much electricity is being used in the commercial sector  
6                   for space heating, say, right away. That is  
7                   information that has to be processed.

8                   And I'm quite comfortable with the  
9                   selection of the end use model as the recommended model  
10                  for forecasting, and I think we discussed at length in  
11                  Panel 1 why in the previous forecasts we made the  
12                  choices we made.

13                  Q. I certainly don't want to go over  
14                  that, and I am only concerned or I am primarily  
15                  concerned with your '92 forecasts which, you can see by  
16                  the year 2015, has a dramatically different result, 220  
17                  terawatthours as opposed to 250 terawatthours for the  
18                  econometric model.

19                  A. Yes. Well, if you look at the  
20                  details you will find that 20 terawatthours of that  
21                  difference is in the commercial sector, and  
22                  essentially, that is looking at a very detailed end use  
23                  description of that sector versus a single equation  
24                  which isn't a very good equation, I would have to  
25                  admit. And I have no trouble with using the end use



1 model in this forecast.

2 The commercial sector has the potential  
3 for significant efficiency improvements and that are  
4 just not being captured by that single equation model  
5 for the commercial sector in EEMO.

6 Q. Well, to the extent that you are  
7 using the lower number you are taking a risk in doing  
8 so?

9 A. No, I do not agree with that  
10 statement.

11 Q. Well, the one thing we know about  
12 forecasts, Mr. Burke, is that these forecasts are  
13 always wrong; that is the necessary result of the  
14 forecast?

15 A. Single-point forecasts are always  
16 wrong, but I provide a range all the time.

17 Q. Well, can we just look for a moment  
18 at your forecasts that we have had in the last three  
19 years? If we look at attachment C to Exhibit 796, page  
20 4 and compare it to page 129...

21 Were you involved in the DSP forecast in  
22 '88?

23 A. Yes.

24 Q. And for 1992, on page 4, your  
25 forecast was 25,596 megawatts, in 1992, when you were

1 sitting just four years prior thereto in 1988.

2 And if you will turn to page 129 and look  
3 at where we are now in 1992, 22.7, 23.4 and 24 for the  
4 upper, your median forecast in 1988 is outside the  
5 range of your forecast four years later.

6 Now, I don't know what your result is  
7 going to be, but in 1988 you were forecasting as your  
8 median result 25,596.

9 A. I think you have got it backwards.  
10 The range that you see on page 129 is the range for the  
11 1992 forecast.

12 Q. Exactly. Well, I don't have the  
13 number which is actually going to occur in 1992, but  
14 you are forecasting 22.7, 23.4 and 24.

15 A. Because that is the one-step-ahead  
16 forecast band for the 1992 load forecast.

17 If anything, you might be interested in  
18 is how does the number which we actually have in 1992  
19 compare to the range that we projected in 1988, and  
20 that information is available, and you can see a  
21 picture of it on page...

22 Q. Well, could I just stay -- I would  
23 like to go over --

24 A. Let me just show you the picture I  
25 would like to show you, and then we -- it is on page 8

1 of Exhibit 738.

2 Q. 738?

3 A. Sorry, 937. 937. And that indicates  
4 what I would consider to be a relevant comparison  
5 between a 1988 projection and current views. And what  
6 it suggests there is that in 1988 what we forecasted  
7 for 1992.

8 Q. Sir, what page are you on, sir?

9 A. Page 8 of Exhibit 937.

10 Q. Yes?

11 A. What that indicates is that the  
12 forecast we made in 1988 for 1992 lies within the 80  
13 per cent bands that we projected in 1988 in the DSP  
14 forecast.

15 Q. I'm not following you there. What I  
16 see is the dotted line being outside -- the dotted  
17 median line in the years 1990 to almost 1995 lay  
18 outside the line, the solid lines which are the 1992  
19 forecast.

20 A. Yes. Well, if the 1988 forecast is a  
21 range, and it is the dotted lines, and what it shows is  
22 that the actual value for 1992, which is where roughly  
23 speaking the solid lines branch off, falls between the  
24 median and the lower bound of the DSP forecast.

25 That is something that one can use to

1 check whether or not our expectations in 1988 were  
2 reasonable in light of what actually happened. To look  
3 at the bands we would produce now one year ahead and  
4 say the forecast you made back then doesn't follow,  
5 then that is just not an appropriate thing to do.

6 Q. But my proposition - and others  
7 perhaps after will comment upon this - my proposition  
8 to you that the median line you proposed in the DSP  
9 forecast is outside the present range to use, that is a  
10 correct fact, is it not?

11 [2:25 p.m.]

12 A. There are several years for which the  
13 median forecast prepared in 1988 lies above the upper  
14 bound of the current forecast. I'm not sure what one  
15 can conclude from that, but that's true.

16 Q. And if we did a similar comparison,  
17 if I can do it with you, in 1988 you estimated the peak  
18 load in 1991, I think it was 22.8 gigawatts, if I can  
19 find the reference to that. 1991.

20 A. Well, I can't find that.

21 Q. I suggest to you that the actual for  
22 1991 was 23.1 gigawatts.

23 Basically what has happened in three  
24 years, in just three years between 1988 and 1991, that  
25 the load actually ended up being at the lower load

1 forecast which, according to the 1988 forecast, should  
2 have had a 10 per cent possibility of occurring.

3 Is it not fair to say that we are  
4 tracking the lower load forecast approximately in the  
5 DSP at the present moment?

6 A. The DSP is a long-term trend  
7 forecast, 25-year projection. Cyclically I considered  
8 it quite an accomplishment that we have not gone  
9 outside the bounds at the trough of the worst recession  
10 since the 30s, does not suggest what long-term path we  
11 are on, that we have all kinds of other analysis to  
12 indicate the long-term trends for the economy.  
13 Economies have cycles, I think you recognize that, I  
14 recognize that, and...

15 Q. Notwithstanding your strenuous and, I  
16 am sure, very attentive efforts since 1988, or whenever  
17 you took over, to recognize all the factors that you  
18 have told us about, in fact you have ended up in a  
19 situation where we are tracking something you thought  
20 would have a 10 per cent changes of occurring; isn't  
21 that the fact?

22 A. I don't think we are tracking it. I  
23 think we have a result for the year 1991 which is low,  
24 lower than the median. And it's close to the lower  
25 bound, I don't think it's actually at the lower bound.



1                   So I think that the forecast, what it  
2                   claims to do is that the forecast range 80 per cent of  
3                   the time will capture the actuals. It has done that,  
4                   and...

5                   Q. But basically I am correct, that in  
6                   three years the actual result tracked something that  
7                   was projected to be about a 10 per cent chance of  
8                   occurring. That's a fair statement, is it not?

9                   A. I think it's a little higher than 10,  
10                  but nonetheless it's at the lower end of the range.

11                  Q. Yes. And everything I have read in  
12                  all these documents would indicate that the long term  
13                  forecasts are much more difficult and much more  
14                  problematic than the short-term forecast; is that not a  
15                  fair statement, too?

16                  A. No, I don't think so. At least I  
17                  couldn't characterize it as simply as that. Short-term  
18                  forecasting is, in many ways, more volatile than  
19                  long-term forecasts, which is why the -- it goes to the  
20                  whole nature of the uncertainty bands we have produced,  
21                  which was discussed at length in Panel 1.

22                  For any given year, knowing the timing of  
23                  a downturn or an upturn is very difficult to forecast,  
24                  but averages over periods of years, which is what  
25                  long-term forecasts represent, it is possible to get

1 those roughly right without increasing the uncertainty  
2 in the forecast exponentially, which is why our bands  
3 don't increase exponentially.

4 Q. I am sure this matter has been dealt  
5 ad nauseum, and the documents state, I would have  
6 thought, repeatedly that the long-term forecasts are a  
7 much more problematic exercise than short-term  
8 forecasts. You are disagreeing with that, are you?

9 A. I am suggesting that on a  
10 year-by-year basis the uncertainty in the load forecast  
11 does not increase at the same rate into the long-term  
12 as it occurs in the short-term.

13 The total uncertainty 20 years out of  
14 plus or minus 20 per cent or so that is in these  
15 forecasts, is not simply something that you would get  
16 by compounding the uncertainty in one or two years  
17 ahead.

18 One or two years ahead we recognize a  
19 higher degree of uncertainty relative to the growth  
20 rate itself, the total growth over the period, than we  
21 do in the long-term.

22 Our two or three year ahead forecast can  
23 be plus or minus 6 or 8 per cent, at the same level of  
24 confidence that we would over 20 years plus or minus 20  
25 per cent, and it is not proportional.

1 I think any forecaster who has had to  
2 deal with economic cycles understands that to choose  
3 the timing of ups and downs in a particular cycle is  
4 very difficult, and that if you have the luxury of  
5 averaging over cycles, you are likely to do better than  
6 you would on each and every year in between.

7 Q. And it is by virtue - and it's stated  
8 repeatedly in the DSP - it's by virtue of that  
9 uncertainty of being uncertain as to when you are going  
10 to come out of a recession, or whatever, that the DSP  
11 said for that reason, amongst others, you should plan  
12 to the upper load growth; isn't that fair?

13 A. The choice of planning to the upper  
14 had nothing to do with the load forecast itself. The  
15 load forecast itself recognized a range of outcomes  
16 and --

17 Q. The uncertainty of that range in the  
18 DSP, and we can turn it up, if you want, says for that  
19 reason you should plan to the upper.

20 A. I don't think it has -- if there is  
21 any implication you are reading into it that somehow  
22 the upper is more likely or something, I don't follow  
23 that.

24 Q. Not that it is more likely, but that  
25 if it occurs you are ready for it.

1                   A. That's a different issue entirely  
2                   from whether it's easier to forecast or something.

3                   MR. B. CAMPBELL: With respect, Mr.  
4                   Chairman, that is an issue in which there has been no  
5                   change since the Panel 10 was here, and all of this has  
6                   been extensively examined over the course of time since  
7                   the Update came out to Panel 10.

8                   MR. HEINTZMAN: I think we can move on to  
9                   other matters.

10                  Q. I want to look with you - perhaps,  
11                  Mr. Snelson, you might be the best person to address  
12                  this issue - that is page 13, I think it is, or page 17  
13                  of attachment C to Exhibit 796. And under the figure  
14                  1.2.2.1, the third sentence, it states:

15                         Rate increases are then forecast to  
16                         average slightly below inflation until  
17                         about 2005, around which time the need  
18                         for new supply to meet growing demand and  
19                         replace aging facilities will result in  
20                         prices again rising faster than  
21                         inflation.

22                   Do you see that sentence?

23                   MR. SNELSON: A. Yes.

24                   Q. We can see the graph turning sharply  
25                   or elbowing upwards at 2005. Now, I take that sentence

1 to mean that there will be new facilities generation  
2 put into effect in 2005 that's causing this new price.

3 A. We believe that the price forecast  
4 that is in here, reflects the decisions up to the  
5 October Board memorandum which is attachment A to  
6 Exhibit 796, and it is based upon the capital program  
7 that is consistent with that.

8 Q. Which had new generation coming in  
9 around 2005?

10 A. It had the Manitoba Purchase coming  
11 in around that time, and then it had some hydraulic  
12 coming in a little bit later.

13 Q. It says the need for new supply to  
14 meet growing demand and replace aging facilities. I  
15 took that to be a new facility such as being paid for  
16 now at Darlington, that there would be a need for a  
17 price increase as a result of those new facilities  
18 coming on stream. Isn't that what this is telling us?

19 A. I believe it is relating to new  
20 facilities, new generation and transmission facilities,  
21 and that they are as described in the October board  
22 memorandum.

23 Q. And because of that increase in  
24 price, it was forecast that demand would therefore fall  
25 off.



1 A. Maybe Mr. Burke should address that.

2 MR. BURKE: A. As has come up quite  
3 often in the hearing, the effective price increase on  
4 demand is delayed, it's a protracted impact. The total  
5 effect of the 10 per cent change that occurs between  
6 2005 and 2015 here would be a 4 per cent reduction in  
7 demand but it would take 20 years for 90 per cent of  
8 that effect to occur.

9 Over the period here the average price  
10 increase is about 5 per cent. It lasts for five years.  
11 It might have made a 1 per cent difference to demand by  
12 the end of the period, at best.

13 Q. So you are saying that now that you  
14 are not planning you say to have new facilities in  
15 2005, but 2009/2010, that demand will not fall off to  
16 that extent because the price won't go up in 2005 or  
17 thereabouts?

18 MR. SNELSON: A. I'm not sure what  
19 changes you are referring to, Mr. Heintzman.

20 Q. Well, are you now calling for new  
21 major facilities in 2005? I had understood that, no,  
22 you are not; you are calling for them in 2009.

23 A. This was referring to generally new  
24 facilities. It wasn't talking necessarily about new  
25 major supply facilities in the form of nuclear or

1 coal-fired generation.

2 Q. Whatever it's calling for. I am  
3 suggesting to you that that statement is not now  
4 consistent with - and I think you are acknowledging -  
5 the December 1992 plan, you are not calling for new  
6 facilities in 2005.

7 A. There is a change or there will be a  
8 change in this picture eventually as a result of the  
9 December board decisions, and it may well have less  
10 price increase in this period, and it should have less  
11 price increase in this period because of the  
12 cancellation of the Manitoba Purchase, and then there  
13 will be adjustments in the transmission that may have  
14 some effect here.

15 The facilities being referred to include  
16 Little Jackfish and the hydraulic program that is  
17 deferred into that time period, as well as the major  
18 supply that you are referring to.

19 Q. I am suggesting to you that in the  
20 plans you have put before this Board now as a result of  
21 the December 1992 board meetings, that there is now no  
22 facilities as are reflected in the sentence I read to  
23 you from page 17 of attachment C.

24 A. And I have agreed with you that the  
25 rate pressures associated with the Manitoba Purchase

1 that was cancelled at that time will be diminished and  
2 that there will also be a reduction in rate pressure  
3 due to the deferral, the cancellation or deferral of  
4 transmission associated with the Manitoba Purchase.

5 Q. And as a result of that more demand  
6 than was forecast associated with the real electricity  
7 price forecasts shown on page 17.

8 A. If that was the only change that was  
9 to take place, then that would tend to somewhat reduce  
10 that increase in electricity prices.

11 Q. The same thing is dealt with in  
12 attachment J to Exhibit 796.

13 MR. BURKE: A. While we are looking for  
14 that, I just wanted to make the comment that the price  
15 increases don't start when the facility comes into  
16 service. There are also price increases that predate  
17 the in-service of any new supply facility. Just using  
18 the formulas we use for rate setting, a certain portion  
19 of the interest capitalized during construction enters  
20 the rate base. So that looking precisely at where the  
21 elbow occurs and saying that must be the date when  
22 something is happening, that's not a fair observation.

23 Q. Well, we have heard a lot about when  
24 price increases come into effect in relation to new  
25 facilities, and I don't want to go over that terrain

1 again.

2 But in attachment J at paragraph 1.6,  
3 paragraph 1.6 states that the earliest in-date supply  
4 for new major supply are assumed to be, and amongst the  
5 elements, a four times 659 megawatt IGCC station in  
6 February 2006; is that correct?

7 MR. DALZIEL: A. Yes.

8 Q. All right. And that could as well be  
9 a nuclear station?

10 A. No.

11 Q. Why is that?

12 [2:49 p.m.]

13 A. The nuclear station soon to be 2009  
14 is two lines about that reference to 2006.

15 Q. Oh, I know that, but --

16 A. And that's consistent with the  
17 planning around the median--

18 Q. But it could --

19 A. --not seeking approvals for new major  
20 supply facilities at this time.

21 THE CHAIRMAN: I think Mr. Heintzman's  
22 question might have been: Couldn't you replace the  
23 IGCC 4 times 569 with a nuclear station?

24 Is that your question?

25 MR. HEINTZMAN: Yes.

1 THE CHAIRMAN: I realize that's not what  
2 you are planning to do, but could you do it is what he  
3 is saying.

4 MR. SNELSON: Maybe I can try this.

5 There is a misunderstanding here, I  
6 think. The plan that Appendix J discusses does not  
7 have an IGCC in-service in 2006.

8 HEINTZMAN: The plan --

9 MR. SNELSON: The load and capacity  
10 table, which is the table A1-1 and A1-2, does not show  
11 IGCC in-service in 2006. It shows either IGCC or  
12 nuclear in-service around the year 2010.

13 MR. HEINTZMAN: Q. I know that, I was  
14 going to come to that.

15 You allowed for it as in attachment J,  
16 but when you came to run the computer on it, you didn't  
17 show it coming in 2006, you showed it coming in at 2009  
18 again, the same year we keep hearing about.

19 MR. SNELSON: Because that's when it was  
20 required.

21 MR. B. CAMPBELL: With respect, Mr.  
22 Snelson has pointed out --

23 THE CHAIRMAN: Now, just let Mr. Snelson  
24 and Mr. Dalziel deal with this, please.

25 MR. B. CAMPBELL: I think they already



1 have, Mr. Chairman.

2 MR. HEINTZMAN: Q. Paragraph 1.6 says  
3 that the earliest in-service dates for new major supply  
4 are assumed to be -- one of the ingredients is an IGCC  
5 four times 659 megawatts station. February 2006  
6 modelled as January 2006.

7 Have I read that correctly?

8 MR. SNELSON: A. Yes.

9 Q. So that means that in the system is  
10 the possibility that that can be on-line in 2006.

11 Right?

12 A. They have considered that that was a  
13 possibility they could consider, yes.

14 Q. And my question to Mr. Dalziel was,  
15 that could be a nuclear station.

16 Now do you have any problem with that?

17 MR. DALZIEL: A. Earlier I said no, and  
18 my answer remains the same. And the illustration of  
19 that goes back to Exhibit 646, attachment D.

20 Q. 646, attachment D. Yes.

21 A. And also attachment E. And in those  
22 two attachments we described cases for upper and lower  
23 load growth with and without the approvals.

24 Q. Yes.

25 A. And the paragraph that you are

1 referring to, 1.6 in attachment J of Exhibit 796 is  
2 essentially the same as the paragraphs that were put  
3 into the case summaries in attachment D of Exhibit 646,  
4 and there it's numbered as paragraph 1.7. And that is  
5 also paragraph 1.7 in a similar attachment, attachment  
6 E of Exhibit 646.

7 In those cases when we were under upper  
8 load forecast and you're wanting to have a base load  
9 station brought into service as soon as possible, the  
10 first station that was brought into service as soon as  
11 possible, major base load station, was an IGCC facility  
12 in the year 2006.

13 Q. And you told me on that occasion --

14 A. You asked if that could be a nuclear  
15 station, I said "no."

16 Q. And you said "no" because we can't  
17 get it ready in time --

18 THE CHAIRMAN: This should help me. Why  
19 "no"?

20 MR. DALZIEL: The answer, "why no" is  
21 because we are not seeking approval for -- [Laughter.]

22 THE CHAIRMAN: That is what I thought.

23 MR. HEINTZMAN: There you have the  
24 answer.

25 Q. You are not seeking approval for it,

1 therefore, you can't be ready to do it. And you can't  
2 do that because there is a nuclear moratorium, it's all  
3 tied up into one, isn't it?

4 MR. DALZIEL: A. I think we have said we  
5 are not seeking approval for a nuclear station - and  
6 fossil as well at this time - and that, under upper  
7 load forecasts, impacts on the in-service dates that we  
8 would assume.

9 Q. But this is an upper load --

10 A. We described that in Panel 10, and I  
11 think I'm describing it to you the same way as we did  
12 in Panel 10 at this time now.

13 Q. And basically your answer to the  
14 Chairman is: We can't do it because the board says we  
15 are not asking for those approvals.

16 THE CHAIRMAN: Just remind me, what was D  
17 in 646? I know what E was.

18 MR. DALZIEL: Attachment D in 646 were  
19 the title pages, case data summaries for the upper and  
20 lower load forecast Update plans. And those two cases  
21 would have assumed the hydraulic and the Manitoba  
22 Purchase.

23 THE CHAIRMAN: But were those the update,  
24 nuclear update fossil plans?

25 MR. DALZIEL: No. The update nuclear

1 update fossil, at least as we generally refer to them,  
2 apply to median load forecast as described in  
3 exhibit --

4 THE CHAIRMAN: But wasn't E the upper  
5 load growth and the lower load growth plans?

6 MR. DALZIEL: No.

7 MR. HEINTZMAN: I think they were  
8 median --

9 MR. DALZIEL: Two sets of upper and lower  
10 load plans.

11 Assuming Manitoba Purchase and the  
12 hydraulic facilities in the one set, and that was  
13 attachment D; and then we also described cases for  
14 upper and lower load forecast without the Manitoba  
15 Purchase and without the hydraulic additions.

16 MR. HEINTZMAN: Q. Well, I don't have  
17 the benefit of the document in front of me, nor the  
18 cross-examination, but this is a median load forecast.  
19 We are looking at attachment J. It's a median load  
20 forecast, that's what it says at the top of that page,  
21 that's what it is?

22 A. Yes.

23 Q. And your answer to me why it can't be  
24 4 times whatever nuclear station, is because we are not  
25 asking for approvals. That's your answer.

1 Right?

2 A. Yes.

3 Q. And since you're not asking for  
4 approvals, you can't be ready by 2006. Right?

5 A. For a nuclear station?

6 Q. Right.

7 A. Yes.

8 Q. If you were asking for approvals, you  
9 could be ready by 2006 if you built a station that had  
10 that lead time?

11 A. Yes.

12 THE CHAIRMAN: Just to help me a bit.

13 Are those answers consistent with your answers earlier  
14 this afternoon that you didn't do your planning for the  
15 update on the assumption that there was to be no major  
16 supply approvals, the decision that there was no need  
17 for mayor supply approvals was as a result of the plan?

18 Are those answers consistent with that?

19 MR. DALZIEL: Yes, they are.

20 MR. HEINTZMAN: Q. Now, another point,  
21 and I think I discussed this with you, Mr. Snelson, but  
22 it may have been you, Mr. Dalziel, in Panel 10, relates  
23 to what we now have in Exhibit 937 at page 16.

24 And you will recall I discussed with you  
25 the fact that a chart similar to this for the Update



1 was a more risky plan than the DSP, because it crammed  
2 in that case 870 megawatts into about six-and-a-half,  
3 seven years of coming on-stream.

4 Do you recall that cross-examination?

5 MR. SNELSON: A. I don't recall the  
6 specific numbers, but I recall the general line of  
7 your --

8 Q. Yes. And we now have at page 16 of  
9 Exhibit 937, 10,688 - almost 11,000 - megawatts coming  
10 on stream in something like six-and-a-half, seven  
11 years.

12 Right?

13 MR. DALZIEL: A. It's around, just under  
14 11,000 megawatts.

15 Q. Yes. So that taking the questions  
16 that I asked you in Panel 10, this -- if that was a  
17 risky project for the reasons I put to you in cramming  
18 all that new generation into that period of time and  
19 the economic risks of what it will be like in Ontario  
20 in those years, et cetera, this is even more riskier.  
21 It's a double statement. It's even more risky than the  
22 Update.

23 MR. SNELSON: A. I remember the subject  
24 being discussed, I don't remember the discussion in  
25 sufficient detail to be able to to comment on the

1       relativity of that discussion to what we are talking  
2       about today.

3               So if you want to ask us questions about  
4       that previous cross-examination, I think we need to  
5       review that cross-examination.

6               Q.   Well let me just put this  
7       proposition:

8               If putting 8,700 megawatts of generation  
9       coming on-stream within seven years has a certain  
10      degree of risk to it, bringing on almost 11,000  
11      megawatts in the same period of time is going to be  
12      more risky, having regard to all the economic factors  
13      that will attend that construction; is that not fair to  
14      say?

15              A.   I am having a great deal of  
16      difficulty remembering the discussion, and I'm not  
17      quite sure what risks you are referring to. And  
18      that's, I think, putting this all into context.

19              It's quite a challenging program to build  
20      that much generation in that period of time. I would  
21      want to go back and review it. But I suspect that we  
22      in fact did achieve the building of that much  
23      generation in about that time period in the late '60s  
24      and mid '70s.

25              Q.   Do you recall sort of the discussion

1       centreing around the words "resource smoothing" which  
2       appear in the DSP, that resource smoothing is a  
3       desirable thing to do to spread out your generation  
4       over as long a period of time, so that you are not  
5       subject to the vagaries of the economic conditions in a  
6       particular period of time?

7                   A. Well, of course --

8                   Q. Does that concept of resource  
9       smoothing--

10                  A. Yes, I --

11                  Q. --come to your mind?

12                  A. It does indeed. And you have to  
13       recall here that this generation that is coming into  
14       service over a relatively short period of time is in  
15       fact being built over a much longer period of time.

16                  Q. Obviously.

17                  A. So it's being spread out in that  
18       sense over a longer period of time.

19                  Q. Well, obviously. And Mr. Shalaby  
20       made that point during Panel 10.

21                  But the fact that it's all coming  
22       on-stream within six-and-a-half, seven years, if you  
23       have got 11,000 megawatts coming on-stream, you are not  
24       able to say with some degree of assurance that that's  
25       more risky than having 8,700 megawatts coming on-stream

1 during the same period of time?

2 A. You have to look at all of the risks  
3 that you face. And if you were to say: Say, well, to  
4 reduce that risk I'll build some of the generation  
5 before I need then you're accepting another set of  
6 risks, which is the risk that you build something  
7 expecting that you will need it and end up, in fact,  
8 not needing it.

9 So there are, there are risks on both  
10 sides.

11 Q. Well, you get approvals beforehand so  
12 that you can plan the thing out beforehand as need may  
13 be, which is another subject you and I spent a great  
14 deal of time discussing.

15 But your answer to me at that point was:  
16 Oh, no, we can't do that - and you can read the  
17 transcript - because then we would have to cut back on  
18 our demand management. We can't do that because that's  
19 part of our -- that's one of the highest things on the  
20 list.

21 Do you remember answering that?

22 A. This is where I am at a disadvantage.  
23 You have reviewed this transcript, and I have not.

24 Q. And you would have to cut back on  
25 your NUG program to do it. That's what your answer to

1 me at that point was.

2 A. These are all factors that might come  
3 about if you built more generation than you needed  
4 sooner than you needed.

5 Q. But, in fact, you have cut back on  
6 your DM and your NUG program up to 2015, haven't you?

7 A. We have cut back on our demand  
8 management and NUG program in the 1990s because we  
9 don't need new supply or new demand management or new  
10 NUGs.

11 Q. But the reason - and you can read the  
12 transcript - the reason you gave me for not resource  
13 smoothing and avoiding the risks that I put to you in  
14 Panel 10, is the fact that the very thing you have done  
15 in December 1992, i.e. cut back on your NUGs and cut  
16 back on your demand management?

17 A. We haven't cut back on our NUGs over  
18 the long term, and Mr. Burke and Mr. Shalaby have  
19 discussed the sense in which, although the numbers show  
20 reductions in demand management that it isn't actually  
21 a change in philosophy of demand management.

22 Q. Well, you're not taking any new NUG  
23 programs on at all now, are you?

24 A. In the early 1990s that is true.

25 Q. Well, that's a cutback, isn't it?



1                   A. I have said that we have not cut back  
2 in our NUG program over the long term. I have not said  
3 we have not cut back over the short term.

4                   Q. Coming back to the number of CTUs  
5 that you have in your program, is there any evidence  
6 that the amount of peaking power is greater? That you  
7 need more peaking power in the system as projected for  
8 2010 or 2015 than you did when you were planning a DSP,  
9 as opposed to base load?

10 [2:55 p.m.]

11                  A. I don't believe we do have any  
12 evidence that there is a greater requirement for  
13 peaking capacity in the system now than there was then.

14                  Q. Yes. And, in fact, in relation to  
15 the amount of load shifting that you are undertaking  
16 and the lower load growth I suggest to you that it  
17 should follow from much of the documentation in here  
18 that you have got less need for peaking power than you  
19 thought you needed under the DSP?

20                  A. Mr. Burke is pointing out that load  
21 factors are a little higher now because of the loss of  
22 the space heating load, and that is a factor that would  
23 tend to reduce the need for peaking power relative to  
24 base load.

25                  Q. And therefore, does it not also

1 follow that you would be using those CTUs, those larger  
2 numbers of CTUs that you are planning on putting in,  
3 for base load generation?

4 A. No, there has been an energy  
5 production simulation done with this plan, and the  
6 results have been shown by Mr. Dalziel.

7 MR. DALZIEL: A. In attachment J of  
8 Exhibit 796 in the written discussion at section 3  
9 which appears on page 5 there is a notation on the  
10 extent to which the CTUs are operating, and there is a  
11 line there that says:

12 However, energy from new CTU units  
13 never exceeds 2.3 terawatthours per year,  
14 a six per cent capacity factor.  
15 That capacity factor is certainly much less than base  
16 load operation.

17 Q. But does that tell us whether -- as a  
18 total at 6 per cent does that tell us whether in fact  
19 at some point in time the CTUs are operating other than  
20 for peak load?

21 A. The CTUs would be operating as  
22 required to meet the demand at any point in time.

23 Q. Yes. And what I am asking you is,  
24 does that necessarily -- does that capacity factor  
25 necessarily mean that for some period of time you are

1 actually using CTUs for base load?

2 A. We can't be definitive, but I think  
3 the answer is no.

4 Q. You certainly classify the CTUs as  
5 part of major new supply.

6 A. CTUs are a major new supply facility.

7 MR. HEINTZMAN: Is this a good time to  
8 break, Mr. Chairman?

9 THE CHAIRMAN: Yes.

10 MR. HEINTZMAN: I hope not to have more  
11 than about a half an hour to three-quarters of an hour  
12 left.

13 THE CHAIRMAN: Tomorrow morning?

14 MR. HEINTZMAN: Yes.

15 THE CHAIRMAN: We will adjourn until  
16 tomorrow morning until nine o'clock.

17 THE REGISTRAR: Please come to order.

18 THE CHAIRMAN: Nine o'clock tomorrow  
19 morning.

20 THE REGISTRAR: This hearing will adjourn  
21 until nine o'clock tomorrow morning.

22  
23 ---Whereupon the hearing was adjourned at 3:00 p.m. to  
24 be reconvened on Tuesday, January 19th, 1993 at 9:00  
a.m.

25 JAS/RR/TD [c. copyright 1985]





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